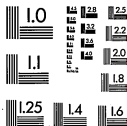




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# Thomas A Edison Papers

*A SELECTIVE MICROFILM EDITION*

*PART IV*  
*(1899-1910)*

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1999

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**Thomas A. Edison Papers  
at  
Rutgers, The State University  
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18 June 1981**

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**START**

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### **LEGAL DEPARTMENT RECORDS CEMENT**

This material consists of correspondence, court records, and other items relating to patent interference proceedings and infringement suits and to other legal actions involving the technical development and commercial exploitation of Edison's cement machinery. Included are documents pertaining to Edison's crushing rolls, which were used in both iron ore processing and cement manufacture, and to his invention of a long rotary kiln for making cement.

Less than 10 percent of the documents have been selected. The selected items reflect Edison's personal involvement in legal matters, detail experimental work by Edison or his assistants, or broadly pertain to matters of corporate organization and patent management. Related material can be found in the records of the Edison Portland Cement Co. and the Edison Ore Milling Syndicate, Ltd. (Company Records Series). The documents are arranged in the following order:

#### **Correspondence**

##### **Interference Proceeding**

*Shiner v. Edison* (No. 27,406)

##### **Case File**

*Thomas A. Edison and the North American Portland Cement  
Company v. Alsen's American Portland Cement Works*

#### **Correspondence**

This folder contains correspondence and other documents concerning a variety of legal matters. The selected documents cover the period 1902-1910. Among the correspondents are Edison; Frank L. Dyer of the Legal Department; Walter S. Mallory, vice president of the Edison Portland Cement Co.; and Edward Dinan, chemist. Included are letters pertaining to the technical development and operation of Edison's long kilns; to cement-related patents assigned to the Edison Ore Milling Syndicate, Ltd.; and to a proposed infringement suit against the Atlas Portland Cement Co. Also included is correspondence relating to the progress of litigation against the Allis-Chalmers Co. and to a possible deposition by Edison regarding the use of pulverized coal in cement kilns.

#### **Interference Proceeding**

##### ***Shiner v. Edison (No. 27,406)***

This folder contains material pertaining to a Patent Office proceeding involving an application filed by Edison on January 27, 1908, for a patent on a rotary kiln that he had invented in 1899 and a competing application by William C. Shiner. The one selected item is Edison's brief on appeal to the commissioner of patents, who ruled in favor of Edison in June 1909.

#### **Case File**

##### ***Thomas A. Edison and the North American Portland Cement Company v. Alsen's American Portland Cement Works***

This folder contains material pertaining to the infringement suit brought by Edison and the North American Portland Cement Co. against Alsen's American Cement Works in the U.S. District Court for the Southern District of New York. The case was initiated in March 1908 and involved Edison's U.S. Patent 802,631 on long kilns. The court decided against Edison and declared his patent invalid on May 7, 1913. The selected items are from *Complainants' Record on Final Hearing* and *Complainants' Brief on Final Hearing*.

### **Legal Department Records Cement - Correspondence**

This folder contains correspondence and other documents concerning a variety of legal matters. The selected documents cover the period 1902-1910. Among the correspondents are Edison; Frank L. Dyer of the Legal Department; Walter S. Mallory, vice president of the Edison Portland Cement Co.; and Edward Dinan, chemist. Included are letters pertaining to the technical development and operation of Edison's long kilns; to cement-related patents assigned to the Edison Ore Milling Syndicate, Ltd.; and to a proposed infringement suit against the Atlas Portland Cement Co. Also included is correspondence relating to the progress of litigation against the Allis-Chalmers Co. and to a possible deposition by Edison regarding the use of pulverized coal in cement kilns.

Less than 10 percent of the documents have been selected. Among the items not selected are letters, memoranda, and reports regarding patent research; printed patents; a draft complaint and affidavit for use in the proposed case against the Atlas company; letters of transmittal and acknowledgment; registered mail receipts; and documents that duplicate the information in selected material.

Richard A. Dyer;  
Suzanne C. Edwards;  
Frank L. Dyer;

*Two Offices*  
*Dyer, Edwards & Dyer.*  
*Specialty: Patents & Patent Courses.*  
*34 Nassau Street.*

Edith, Edith  
Thomas, Edith  
Ed. W. Dyer, Ed.

*New York, July 7, 1902.*

W. S. Mallory, Esq.,  
Edison Laboratory,  
Orange, N. J.

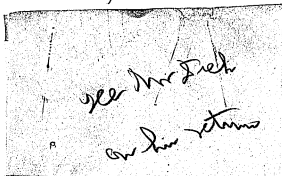
Dear Mr. Mallory,-

I enclose a copy of a letter dated the 25th ult. just received from the Edison Ore-Milling Syndicate and replying to our letter of the 11th ult. regarding the re-assignment of cement patents. I also enclose a copy of the letter from Mr. Lawrence to Mr. Edison referred to in the Syndicate letter.

Yours very truly,

*Rich. A. Dyer.*

RMD/AL  
Enclosure.



[ATTACHMENT]

Copy of letter and enclosure  
from Edison Ore-Milling Syndicate Limited  
to Dyer, Edmonds & Dyer.

---

London, W.C., June 25th 1902.

Messrs. Dyer, Edmonds & Dyer,  
31 Nassau Street,  
New York.

Dear Sirs,

We are in receipt of your letter of the 11th inst., asking us to arrange for the reassignment of certain patents, which Mr. Edison has already communicated to us, for the reason that they relate exclusively to the manufacture of cement.

This matter has been duly considered by the Board of Directors, and we desire to point out that this subject was discussed as far back as July 1900, when Mr. Edison raised the question whether one particular patent should have been communicated to us.

Mr. Lawrence, the Chairman of this Syndicate, immediately wrote a long letter to Mr. Edison (copy enclosed) pointing out that it had always been completely understood from Mr. Edison's letters and speeches that this Syndicate was to have the benefit of cement patents and in 1900 Mr. Dick, with Mr. Edison's concurrence and sanction, on behalf of this Syndicate, entered into negotiations in England for the sale of these patents to an important cement combine.

[ATTACHMENT]

There are additional circumstances besides those mentioned in Mr. Lawrence's letter which undoubtedly indicate Mr. Edison's intention to hand over cement patents to this Syndicate, in which he himself is so largely interested.

We venture to think therefore that there may be some misunderstanding on your part as to Mr. Edison's wishes in this matter, and we should be much obliged if you would further communicate with him, and in particular draw his attention to Mr. Joseph Lawrence's letter to him of the 2nd August 1900, to which we may say that Mr. Edison did not make any reply.

Yours faithfully,

EDISON ORR-MILLING SYNDICATE LIMITED.

J. Hall Jnr.

Secretary.

Enclosure.

[ATTACHMENT]

C O P Y.

July 19, 1900.

Mr. I. Hall, Jr.,  
Sec. Edison Ore Milling Syndicate, Ltd.,  
7 Amberley House, Norfolk Street,  
London, W.C., England.

Dear Sir:-

In reply to your favor of the 6th ult., I beg to state that the patent you speak of was a cement patent, and does not come under the terms of the original contract. All patents coming under the contract will be communicated direct to the Syndicate, as has been the case heretofore, those relating to Cement Improvements, which owing to their character may not come under the contract I will take out direct.

You will be glad to know that the Mills at Edison, N.J. are running regularly except the Bricking plant. Owing to the recent panic in Iron, the furnaces were overloaded with ore when we started up, so we will not ship briquettes until their surplus ore has been worked down to permit of their receiving briquettes. We are turning out about 300 tons of Concentrate daily and stocking it.

As to the costs of concentrating, we are keeping accounts and hope to give you the results in a couple of months. We are not losing any money even with our 17 per cent crude ore, but how much we are making is an unknown quantity. The Zinc Mill continues to run regularly.

We are progressing rapidly with the Cement Mill.

Yours truly,  
Thomas A. Edison,  
R.

[ATTACHMENT]

Copy of letter from Mr. Joseph Lawrence to Mr. Thomas A. Edison.

2nd. August 1900.

My dear Edison,

The Secretary of the Edison Syndicate has shown me your letter of the 19th. July in reference to the specification No. 8485 of 1900, described as "method of and apparatus for grinding screening and rescreening very fine materials in bulk".

In your letter which although dated the 19th. July, did not reach us until the 31st. (evidently having missed two or three mails), you say this specification "does not come under the terms of the original contract."

The specification is not alone confined to cement, but applies also to iron, the terms being as follows:-

(A) "An invention relating to an improved method "and apparatus for grinding and screening very fine materials "in bulk such as iron ore, Portland Cement &c., and to an "improved method of and apparatus for grinding in bulk the "ground and screened material."

Under these circumstances, I have no doubt that you will see that the Syndicate is entitled to the benefit of this improvement under the terms of the original contract, indeed your patent attorneys, Messrs. Dyer admit as much in their letter to us of the 12th. July, wherein they state they have written to their agents, Messrs. Brandon Bros. in Paris, to look to our agent Mr. Woodroffe as their principal and to



[ATTACHMENT]

take all instructions from him.

You will remember that in all your previous correspondence and especially in your speech to the shareholders in December last, you admit that the cement rights are "controlled by the Syndicate." In your speech, after dealing with the cement works and the plant that was being erected, and the improvements that were being made in the same, you go on to urge the shareholders not to part "with any rights for any purpose whatsoever until these two (cement) mills have demonstrated commercially the valuable rights controlled by the Syndicate." You also go on to say that the "experiments are being paid for from this side, the Syndicate realizing without expense."

All these circumstances prove, without falling back on the terms of the Contract, that you regard the Syndicate as controlling all the cement rights, which naturally include the improvements. In the Director's printed report (which was approved by Mr. Dick) which was sent out prior to the meeting, we speak, on the strength of your previous promise, of your communicating to us without cost certain improvements which relate to cement, and also state that "other valuable improvements will, it is promised also be communicated in a similar way" We have also, quite recently received four other specifications of new inventions one of which particularly relates to cement, and we have filed applications in various countries in respect of them to protect the Syndicate's rights.

Yours faithfully,

(Signed.) J. LAWRENCE.

7/10/02/WSK/L

Dyer, Edmonds & Dyer,  
31 Nassau Street,  
New York.

Dear Sirs:--

I have yours of the 7th inst. enclosing copy of letter of June 26th, 1902, from the Edison Ore Milling Syndicate, Limited, also copy of letter of August 2nd, 1900, from Mr. Joseph Lawrence, all of which have been carefully noted.

There is no question but what the Syndicate are entitled to the Cement rights on all machinery which comes in under the contract, but the machinery and devices designed specially for Cement work and invented after the contract was made, does not go to them without further consideration to me.

The patents covered by yours of June 11th, 1902, were assigned in error and should be re-assigned to me.

Yours very truly,

*Law Offices*

*Dyer, Edmunds & Dyer*

*Specialty: Patents & Patent Causes.*

*31 Nassau Street,*

*New York, Sept. 22, 1902.*

*Richard E. Dyer,  
Samuel E. Edmunds,  
Frank E. Dyer.*

*Cable Address  
"Dyer, New York"  
Tel. No. 2909, City.*

Thomas A. Edison, Esq.,  
Orange,  
N. J.

Dear Sir,-

We have received from Edison Ore Milling Syndicate

Limited a letter, dated 11th inst., as follows:

"Referring to the question of the assignment of certain cement patents by Mr. Edison to the Syndicate, it has been arranged that the consideration of the matter should be postponed until Mr. Dick is next in England, when a settlement satisfactory to all parties can no doubt be arranged."

We assume that this means that an arrangement has been made directly with you to this effect.

Yours very truly,

*Dyer, Edmunds & Dyer*

RND/AL

*Hold for Dick*

*ask Dick what become  
of Sir D Dales letter I  
have never answered it  
E*

*Edison Ore-Milling Syndicate Limited.*

TELEGRAPHIC ADDRESS:  
"OBSESSION - LONDON"

TELEPHONE NF  
5214, GERRARD.

*4, 5, 6 & 7, Amberley House, Norfolk Street,  
London, W.C.*

October 24th 1902.

Mr T. A. Edison;  
Orange,

New Jersey,  
U. S. A.

Dear Sir,

At a Board Meeting of the Syndicate held on the 20th inst., the discussion regarding certain of your cement patents, which had been adjourned from the meeting held on the 10th September pending Mr Dick's return to England, was resumed.

Mr Dick fully explained your views with regard to the cement patents which have been communicated to us by Messrs Dyer, Edmonds & Dyer and the feeling was at once expressed by all the Directors that there was no wish whatever on our part to ask you to give us any patent rights to which we are not entitled, and which might be considered not to be covered by the scope of the original agreement with the Syndicate.

We do not in any way desire to take advantage of the fact that these cement patents have been communicated to us and that we

(8)

have filed patent applications on them here and abroad.

In order to recognise the principle of the ownership of the patents the Directors have resolved to offer you a percentage of profits in respect of any patent improvements invented by you being used hereafter, such improvements not being covered by the original contract, and Mr Dick has been asked to consult with you on the matter upon his return to the United States.

We trust that you may consider this suggestion a fair one and that it may meet your wishes, but the Directors are anxious that it should not be felt for one moment that there is any desire on their part to ask for more patent rights than they are entitled to, or which you may feel willing to place at their disposal in the interests of all concerned.

Yours faithfully,

EDISON ORE-MILLING SYNDICATE LTD.,

S. Hall  
Secretary.



TELEPHONE NO. 3577.  
TELEGRAMS: "CECELIA, LONDON."

*Wm*  
HOTEL CECIL,  
STRAND, W. C.

Oct 28/902

My Dear Edison:

I have your cable  
saying rotary knew all  
right & am so pleased  
as it releases you of a lot  
of worry and uncertainty.

You will have received  
a letter from the Syndicate  
regarding the Patent matter.

There is on the records of  
the company a resolution  
advising compensation to  
the small patents outside the  
original patents & practically  
leaving the matter to

and this has been done.

I have not been in  
Rum for several years  
and Burman made  
me promise I would  
come over in a few days  
this trip. I expect to leave  
here Sunday morning &  
on from Hamburg the  
next Thursday (Mon.) &  
should arrive in New York  
the 13<sup>th</sup>.

It is expected that  
the Decadence Or can  
be shipped about Nov 10<sup>th</sup>.

All are greatly pleased  
with your cable about Requies.

You & myself. In justice  
to the Legation I must  
say that they met me  
in the most liberal and  
equitable manner regarding  
this question & without a  
hesitating decision. I found  
that there had already been  
about \$3100<sup>00</sup> expended in  
taking out these patents  
in all the countries & I was  
quite sure that at present  
the refunding of this money  
& the taking out of the  
additional patents would  
run up to a large sum.  
The point was to fix the  
Company's liability to you.

I have had for some  
time the opinion that  
you were nearing the  
end of all your problems  
in Land & I believe the  
next few years will bring  
you the deserved reward.

It has been a little slow  
coming but it is in the  
way. With best wishes

I am, Sincerely yours

H. C. Dick



C O P Y

Dec. 4, 1903

Roaster Plant:

Mr. W. H. Mason, Supt.,  
Edison Portland Cement Co.,  
Stewartsville, N. J.

Dear Sir:-

In reviewing the work of the kilns for some time past, it is evident that the speed of rotation of No.1 kiln at least, should be lessened; and also that provision be made for changing the speed as desired -- with or without interfering with the speed of the chalk feed screw.

The main object we wish to accomplish is good clinker and more of it. The chief fault of the clinker so far has been insufficient oxidation. The heat, as a rule, has been sufficient, but incomplete oxidation has been repeatedly noticed and latterly it is more evident, since we have been increasing the output.

Before taking up the case of our kilns, there are to be understood a few general points relative to the operation of a kiln.

First: The speed of the chalk feed screw determines the quantity of intake of chalk, and, consequently, the quantity of output of clinker. This is axiomatic, the more chalk you feed to a kiln, the more clinker you will get.

Second: The speed of rotation of the kiln determines the length of time required for a given quantity of chalk to come forward. The faster the kiln rotates, the faster the material is carried forward, and vice versa.

Mr. W.H. Mason ..... Sheet No. 2.

Third: The burden of a kiln decreases as the speed of rotation of the kiln increases. That is, the amount of material (the load) in the kiln will be less at a high speed than at a low speed. This is seen from the second statement, and can be illustrated as follows:

Take two bricks, and have two kilns, A and B, kiln A making a revolution in 60 seconds and B in 30 seconds. Drop a brick at same time in each kiln. It will require a longer time for the brick to travel through A than through B. The brick will fall out of B first, which is rotating the faster. Now, if we fed one brick a second into each A and B, bricks would be dumped out of B sometime before they would emerge from A, and yet, at the instant the first brick dropped out of B, each kiln would have the same number of bricks in it. In kiln A, and at the same rate as from B

*none would be down at the clinker end, and piled up more bricks. After a time bricks*

But A would have the heavier burden. There would be more bricks in it, although now dropping a brick per second, the same as B. A would be carrying more bricks, and so have a heavier load; the bricks would, of course, be piled deeper in the kiln.

Return to the consideration of our kilns. Observations on one kiln will serve to illustrate the point in view in this note.

The examination of clinker from kiln No. 2 for the past few days has shown plainly the need of more oxidation, while the interior, although burned hard enough, was sufficiently oxidized. *On several occasions the clinker was perfect on the outside* On one occasion, on Dec. 3, the circumstances were as follows: kiln cool; clinker not heated sufficiently. A short time later the heat increased; clinker heated hard enough; but insufficient

oxidation plainly evident. Had more air admitted, and soon noticed the kiln not so hot as before. Shut off some of the air, regained the heat, but oxidation not yet complete. At this point we had reached the maximum excess of air allowable for the coal being consumed, and the clinker yield was not good. It needed more oxidation. Now, if the speed of the kiln were cut down slightly, so as to compel the material to remain in the hot, oxidizing atmosphere a longer time, the clinker would have been more thoroughly oxidized; this would be the case.

First: Because there would be less liability of clinkers being formed suddenly by being rushed forward into the clinkering zone, which occurs when the kiln is running too fast. The main objection to this is that clinker so formed balls so suddenly as to interfere with the oxidation of their interior. The outside coating once formed prevents the oxidation of the interior.

Secondly: Thorough oxidation is not accomplished in an instant but requires time. How long cannot be exactly said.

These are the main objections to running at a high rate of speed. Of course, too slow a speed might be objectionable, result in over-burning, but this would be erring on the side of safety. We could easily remedy that. The claim is not made that we can put the kiln at a certain fixed speed, to be the best under all circumstances, but we do claim that better results can be obtained by a lesser speed than at present. With a light burden, the kiln can rotate faster without interfering with good burning; ample opportunity is there for oxidation in a shorter time, but with a

heavy burden a given handful of chalk, for instances, has not the same opportunity for complete oxidation that the same quantity of chalk has with a light burden, each handful being subjected to same heat for the same time. In the case of the heavier burden, more time is required.

To sum up, then, we can say a choice must be made between these two conditions:

First: A given chalk feed; kiln rotating at a given rapid rate and a lighter burden. The material is in the heat a shorter time, and the clinker formed more suddenly.

Second: The same given chalk feed; kiln rotating at a lesser speed; the burden greater. The material is in the heat a longer time, and the clinker formed more gradually.

The choice must be between these two. What advantages are there in the first case?

As a rule, in any metallurgical or chemical reaction, where we wish to have formed some new product by combining two or more ingredients, particularly where heat is required, better results are obtained by bringing about the reaction slowly. Sudden and violent plunging of materials into heat may serve to disintegrate (and that is a good way to do it), but not to combine. Faulty combinations can also readily ensue from clinkering too suddenly, even though the chalk mixture be correct as a whole. In clinker formed suddenly, the union of the particles may take place; but the complete combination or reaction of the molecules is not facilitated.

W.H.Mason --- Sheet No. 5.

These are the principal reasons submitted in argument for a provision for a slower speed of kiln. Many other points of a detailed nature might be advanced in favor of it, but, believing the point sufficiently covered by the above, I am,

Yours truly,

(signed) E. P. Duhan

P S. - Requires 1 hr. 40 min. for passage of brick through the kiln; from actual observation - by W.H.M. 1/25/04.

C O P Y

The Edison Portland Cement Co.

Edison Laboratory, Orange, N.J. 12/11/03/  
TAE/L.

Mr. W. H. Mason, Sup't.,

Stewartsville, N. J.

Dear Sir:-

Mr. Dinan's observations of the Kiln received.

1st. I do not quite understand what he means by "Insufficient oxidation". Does he mean the clinker is not oxidized? I have always understood that if the temperatures were high enough all the reactions will take place, and they will take place at the same temperature whether there be an oxidizing or reducing temperature, that the clinker if in highly oxidizing atmosphere will be reddish black from oxygen combining to raise the iron to the ferric state, this is shown when greenish clinker is held in Bunsen flame. On the contrary, if the gas is reducing the clinker will go to the green ferrous stage.

I will give several reasons why I think high speed is the best condition to produce large output in our kilns, say 2 revolutions per minute, but they are only arguments and theory and very little reliance should be placed on them in view of the fact that we have every means to experiment and let results bring out the proper theory and method.

Arguments for high speed.

1st. Lighter load per foot hence pressure on itself in sticky state will cause it to ball less or if balled the mass will be more porous. A sticky mass 6 inches thick will have a pressure on the bottom layer due to the weight at that height; if one foot thick it will have twice the pressure, hence the tendency to ball up is greater and in addition the extra weight acting on what is balled will make it more dense by continuous pounding by its own increased weight. In addition, when the larger masses enter the strong clinkering zone they will break up into finer balls if the load is 6 inches than they would if the load was 12 inches as the porosity will be less in the latter case. Therefore, if the balls are larger and in addition more dense, they will not burd to the centre so rapidly hence the heavy load balls will require more time.

2nd. The passage of brick through the kiln is not criterion of the speed of the chalk and clinker for the reason that a brick can only progress by the action of the angle of the kiln,

whereas the chalk on account of bulk, air and explosion of CO<sub>3</sub> blowing up and the formation of the ring at chalk end produce a congestion and raise the angle line far above the normal grade of the balance of the stock and there is continual avalanches of material which causes it to advance twenty to fifty feet in a single revolution of the kiln, whereas the brick would not more but a few inches; now with a fixed load, if you slow the kiln to half, the chalk hill doubles in altitude and the tendency and distance in which the stock will avalanche ahead is greatly increased and proceeds so far into the clinkering zone that it gives off CO<sub>2</sub> to disturb the proper combustion of the coal, for the reason that coal will not burn at all when the proportions of CO to CO<sub>2</sub> reaches 33 volumes of CO to 66 volumes of CO<sub>2</sub>, no matter if you have plenty of oxygen just as in a blast furnace ~~when the volumes of CO to CO<sub>2</sub> as stated, is reached no further reduction of iron ore can take place.~~ Therefore, to get good economy, good combustion and high temperature, it is very desirable that the principle proportion of the CO<sub>2</sub> should be driven off before it gets near the clinkering zone, but the avalanching movements prevents it, the greater the load, the greater the avalanching and projection of unprepared chalk into the clinkering zone to disturb your combustion, lower the temperature and produce badly burned clinker.

3d: Now if the chalk ring formed at chalk end builds up to the same height with a light load as it does with a heavy load, then there would be no gain in speeding the kiln when the chalk feed was constant because the avalanching will be just the same, and the principal reason for speeding would be nullified and these arguments fall to the ground.

4th: Could the formation of this ring be prevented there would not be any avalanching ~~but~~ a steady even progression of the stock and at 2 revolutions per minute there would be ample time for the heat to penetrate to the centre of the balls on account of the long zone of high temperature, cement clinker is very good conductor of heat, the centre of cube of one inch will reach that of the outside in a few minutes, and the reason so many come through the kiln with centres which have never reached the temperature of the zone is that the outside was continuously receiving coatings of low temperature chalk ~~run on top of it by the avalanching~~ ~~when~~ ~~times~~ get excessive it brings so much CO<sub>2</sub> into the combustion zone that you will lose your heat no matter how much coal you put on.

We will be met by this mechanical difficulty every time we try to increase the load beyond a certain point in our kilns, say 30 to 32 barrels beyond that amount the avalanche will project itself further into the combustion and limit the output by making it impossible to burn the coal by the CO<sub>2</sub> produced, and the only way to increase the output is to stop or reduce the avalanching at the back ring and I told Mason to speed the kiln upon the theory that the height of the ring and load would be less and thus reduce the avalanches so the greater load can be carried.

6th. The time required to burn cement is purely a question of temperature and heat conductivity of the mass; and inch cubes can be burnt perfectly to the centre in twenty minutes in a gas furnace if its attempted to burn it in less time by raising the temperature, the outside will start to melt. I do not think it would be burned any better if it was in an hour. The reactions are not forced reactions except explosion of CO<sub>2</sub>, they would take place at ordinary temperature of themselves if they were viscous. The only functions performed by heat after explosion of CO<sub>2</sub> is to soften their ingredients so their molecules can act. When this soft stage is reached the reactions can take place, any increase in the softening does no good. The finer ground the materials are, the less the softening required and the lower the temperature; if the particles are coarse ground, it would be necessary to raise the clinker to a semi-fluid condition to get combination of the coarser particles.

Could the gun be used at the chalk end to break up the ring and stop or reduce avalanching, you could easily raise the output but I suppose this is not practicable.

Yours truly,  
Sgd. Thos. A. Edison



C O P Y

ECM No. 17

Jan. 8, 1904.

Kilns:

Mr. W. H. Mason, Supt.,  
The Edison Portland Cement Co.,  
Stewartsville, N. J.

Dear Sir:-

The letter of Mr. Edison's relative to the operation of the kilns, contains, besides much valuable information a few statements which do not quite agree with results we have obtained with the kilns. As well as not quite conforming to demonstrated results, hitherto obtained in general practice. Neither can I see how they can stand theoretically, and wish to call your attention to the same. It is agreed, of course, that it is best to let actual practical results bring out the best methods.

The insufficient oxidation of clinker mentioned in letter of December 4, 1903, applied to the interior of the clinker chiefly. This fault of the clinker has been the case on different occasions, and as was before stated is believed due to the rate at which the material is propelled through the kiln. The exterior of the clinker in nearly all cases was sufficiently oxidized, i.e. the reactions were completed. The interior in many cases was not. In some cases the exterior showed the effect of prolonged heating after formation and had a thin reddish brown coating. In the clinker with faulty interior the combination of the lime with silica and

W.H.M. .... 2 1-8-04.

alumina is not complete; the sulphur present in some cases existing as sulphide of lime which should not be. Such sulphur should be converted to sulphate of lime. To do this, requires oxygen, necessitating air, and it takes time to do it. It must be understood that to make Portland Cement clinker, an oxidizing atmosphere is necessary, together with a high temperature.

Take good clinker and heat in the Bunsen flame, in either the oxidizing or reducing part, and a reddish brown color will be noticed on the surface. Note that this takes place in either the oxidizing or reducing flame of the Bunsen burner. I believe it to be nothing more than a separation of the ferric oxide, due to the heating, from whatever state of combination in which it may have been. Supposing the greenish colored clinker has ferrous iron which can be changed to ferric iron, this does not prove that all the iron in that clinker is ferrous iron. The fact is, practically none is found in the cement, so it could hardly have been in the clinker.

There is a time when some of the iron is in the ferrous state. This is when ferric oxide is uniting to silica. In the chalk iron exists under the two conditions, ferrous and ferric, chiefly in the latter state. In much of the rock of this section, or belt, sulphide of iron is present; it can easily be seen with the naked eye. This much alone could account for the ferrous iron. There could also be present ferrous silicate, but likely very little of it. The most of it is in the ferric form. Certainly some of this ferric oxide reacts with the silica, even in the presence of the large quantity of lime. It is an established fact that ferric oxide and silica cannot, unite directly. Ferric

W.H.M. .... 3. 1-8-04.

oxide must first break down to the ferrous state which it does by heat, according to this equation  $\text{Fe}_2\text{O}_3 = 2\text{FeO} + \text{O}$ . The ferrous oxide then united with silica to form the different silicates of iron. At this stage the presence of ferrous iron is accounted for but this could hardly apply throughout the whole piece of clinker.

The uni-ferrous silicate melts at about the melting point of cast iron; when suddenly cooled it forms into crystals of dark olive green color. The bi-ferrous silicate melts at about the melting point of steel; it is flesh colored when cooled. The tri-ferrous silicate is still less fusible, remaining viscous at a white heat.

We are more likely to have the uni-silicate or the bi-silicate. Note that the colors are olive green and flesh colored, colors noticed at times on the outside clinker. It also requires quite a high heat to bring about the reactions of ferric oxide and silica. Also ferrous silicates readily decompose in the air yielding ferric oxide and silica.

Now remembering the great preponderance of lime over oxide of iron, to react with the silica; the small percentage of oxide of iron present; the fact that practically all the iron present is in the ferric state; and the difficulty attendant upon the reaction of the ferric oxide with silica, it being performed in the case of Portland Cement clinker, in an oxidizing atmosphere, the chances are that very little silicate of iron is present, and it cannot readily be understood if the oxygen of the air in a short time can decompose ferrous silicate, why the highly oxidizing heat of the kiln does not accomplish this almost instantly. This leaves

W.H.M. ----- 4.

very little chance for the presence of ferrous iron in the clinker. It could be believed that some ferrous iron might result from the partial combustion of coal in contact with it, coloring the exterior but we have first to get proof that the iron is present in the ferrous state. From the fact that the uni-ferrous silicate is olive green colored; and that clinker is olive green colored, it does not follow that the iron in the clinker is in the ferrous state; there are other substances in the clinker besides the iron and the silica to modify the color.

Such of the ferrous oxide as does react with the silica acts as an oxygen carrier, giving up an atom of oxygen for every molecule of ferric oxide reacting, as noted in the equation  $\text{Fe}_2\text{O}_3 = 2\text{FeO} + \text{O}$ . For want of a better explanation, it is taken, by some that this atom of oxygen unites with a molecule of lime;  $\text{CaO} + \text{O} = \text{CaO}_2$ , forming dioxide of calcium. Believing it to be easier to oxidize ferrous iron than to oxidize lime to ~~calcium~~ dioxide it is not more likely that the oxygen goes immediately to ferrous iron and oxidizes it or else the most easily oxidized substance present, which is not lime?

The statement was made that the clinker were insufficiently oxidized, meaning the reactions were not completed; their interiors were soft and contained material like what you find immediately beyond (speaking from the coal end) the point of incipient clinkering, where the coating begins to adhere to the lining; sulphur was present as calcium sulphide; and less and less evidence of reaction as you observe from the surface towards

~~towards~~ the centre of the clinker, which was soft, and dark brown to light colored. Such is a description of the worst cases which are partly due to hurried heating at the time of first adhesion particularly.

Also this variety of clinker: outside appearance satisfactory; hard and crystalline coating; proceeding inwards through a piece say: 3" - 4" diameter, we see a half inch shell of acceptable clinker; next half inch not so dark in color nor as crystalline as the exterior. Proceed farther towards the centre and you will find the mass hard enough perhaps but the structure instead of being crystalline is massive; it is also light in color. The very centre perhaps is still lighter in color. A piece of this interior on further heating will darken and show crystals, look more like clinker.

While Mr. Edison has his arguments for high speed of kiln divided under different heads, the underlying idea seems to be that he wishes to avoid the formation of the chalk ring at any rate avoid the sudden avalanching of chalk toward the coal end. Let it be understood we do not favor the avalanching of the chalk toward the coal; also that we wish to avoid the formation of chalk ring and to attain this it is believed a slower speed will accomplish this better than the present high speed.

His first argument for high speed is that thereby we will have less trouble from the clinker balling. He holds, a relation exists between depth of load and formation of balls. That the greater the load of material in the kiln, the deeper the bed of material, and the greater the tendency to ball. This might

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all be well if the large clinker balls were formed entirely from smaller ones, by a ball rolling about and gathering smaller pieces; or e.g. like drops of mercury running together. The clinker balls are not formed in this way. Sometimes with a very hot kiln a larger sized ball, say 10" or more, in diameter, will take up small sized clinker, by rolling over the latter, causing the adhesion; but you would not increase the diameter of a ball 3" by this method. It might coat up for one larger with small balls, but not for any more. The adhesion is too weak. You can readily note such adhered clinkers on the cooled ball after leaving the kiln.

It is safe to say that in nearly every case balling is directly due to the composition of the raw materials and not to the depth of load in the kiln.

Balling takes place as readily with a light load as with a heavy load. I notice that on December 10, 1903, the burners complained of the material balling somewhat and we were then running on a light load of chalk. Again we usually did not have trouble with balls even though running on heavy loads. Furthermore the balling begins before being clinkered i.e. about 25' from the coal end. They come towards the coal end already formed and do not grow by taking on layers of clinker to any appreciable extent. Look at their structure and this can be seen. At about 145' from the coal end was found the first evidence of material gathering; small accretions, the size of a corn and easily crushed with the finger, they were all intermixed with the bulk of the soft chalk. Coming toward the coal end, the accretions grew in size until about 35' from the front end (coal) where there were some as large as a fist

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although still soft and could be crushed in the hand. There was still present some loose chalk. At about 25' from the coal end, the accretions had hardened more and shrunk somewhat although still smooth. Here they must have become plastic as the coating on the kiln lining begins at about 20 to 25' from the coal end. At 15' from the coal end, the balls have shrunk still more; are harder and rougher and definitely formed; some showing cracks as if separating into two smaller balls.

Any balls formed therefore have their origin along about 35' from the coal end, and they do not grow appreciably by adhering to already formed clinker. You may remember we never had any trouble from balls forming whenever ~~we~~ we shut down the kiln to patch it by allowing a bed of clinker lie over a hole. The clinker rolled about and came out as usual immediately on starting the kiln. Some clinker, of course, stuck all along where the clinker came in contact with the coating. This formed a rougher bed in which some of the later clinker was caught on revolving the kiln; some of it adhered after becoming soft and plastic.

I know that the composition of the raw materials has the most to do with the balling. Ordinarily speaking the higher the percentage of lime the lesser the tendency to ball. A chalk in which the correct percentage of lime 75 gives clinker of the proper size and grade. To increase the percentage of lime say to 76.5% would result in the formation of smaller sized clinker. To reduce the percentage of lime say to 73.5% would cause the clinker to form in large balls. It does not of course follow that this

W.H.M..... 8

would be the result from day to day but what has been said applies to the one mixture. One day we could run a chalk of 75% carbonate of lime and find that the clinker balled pretty badly. The next day we could run in another mixture say 73.5% carbonate of lime and the clinker be of the usual size. Other elements than the lime and silica enter into it, chief among which is the alumina. But any more of this will be foreign to this letter, to the substance of which let us return after again stating that the balling cannot be connected with the depth of load of material in the kiln.

The passage of a brick through the kiln was not given to illustrate the rate travel of the chalk through the kiln. Bricks were mentioned simply in demonstrating that the speed of the kiln had nothing to do with the quantity of output; to prove that it was the rate of feeding that controlled the quantity of output.

In Mr. Edison's letter, the statement is made in speaking of the avalanching of the chalk that "with a fixed load, if you slow the kiln to half, the chalk hill doubles its altitude, and the tendency and distance in which the stock will avalanche ahead is greatly increased, etc."

In the first place, I do not think the chalk hill would be doubled, with double the load. Also it is very clear to see that material could hardly be projected as far forward with a slow speed as with a high speed. Whatever avalanching of chalk does occur is not continuous, but <sup>and is intermittent</sup> intermittent, because it collects behind the chalk hill, the greater chalk crowding up behind every



W.H.M..... 9

movement; when finally enough has collected to flow over the ring, which is irregular in diameter, that part nearest the coal end lunges forward forming a path as it were for all behind it, easily slipping along on its own bed. Now if the kiln is not revolved so rapidly there will be more material in the kiln to take up the heat passing along to the stack, and the place where the  $\text{Co}_2$  is driven off will not be so definitely marked as it is at present. Neither will the chalk ring be so definite; it can be expected to be spread out more through the length of the kiln; it will not be so abrupt. This structure of it together with the slower revolution of the kiln will cause the chalk to advance more gradually and not to plunge into the combustion portion of the kiln so suddenly as it now does. If for no other reason than to remedy the last mentioned trouble which we now have, why not try it at a slower speed?

The statement of Mr. Edison's that "coal will not burn at all when the proportions of Co to  $\text{Co}_2$  reaches 33 volumes of Co to 66 volumes of  $\text{Co}_2$ , no matter if you have plenty of oxygen" can hardly be true for all percentage of oxygen present. Probably coal could not be burned where the above mentioned gases constitute all the atmosphere; but certainly if you added more and more oxygen or air, the percentage of the total sum of Co and  $\text{Co}_2$  would become less and less until finally they would constitute such a relatively small percentage of the whole that coal would burn. I am not prepared to say at what percentage of air or oxygen this combustion would take place, but that portion of Mr. Edison's

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declaration "no matter if you have plenty of oxygen" unlimited as it is, cannot be accepted.

Again he says that "no further reduction of iron can take place" speaking of the above mentioned relative proportions of Co and Co<sub>2</sub> in blast furnace gases. This may be very true, but, its citation here hardly helps what he is attempting to prove, difficulty of combustion of coal with the above mentioned proportions of gases mentioned. If iron cannot be reduced, with those conditions, then the atmosphere must be oxidizing, or neutral, to say the least. If that is the case with iron, it is so because the coal is then burning more completely than it should for the reduction of the oxides of iron in the ore. It must also be borne in mind that at the temperature of melted pig iron, and somewhat less, Co<sub>2</sub> is oxidizing to iron, and if it becomes too excessive in the blast furnace gases the atmosphere there will no longer be reducing but the opposite. So that for the blast furnace it is a case of two complete combustions of coal-deriving too much oxygen from the air and not enough from the oxide of iron in the ore.

Also remember, that the action of the blast furnace is one of reduction whereas the action ~~of the action~~ of the rotary kiln is one of oxidation. In the case of the blast furnace, it must be reducing to reduce the iron from the oxide of iron. The rotary kiln, an oxidizing atmosphere is required; we want no reducing action. And if it were immaterial whether the atmosphere be oxidizing or reducing, it would of course be economy to burn our coal completely, to do which an excess of air is required. So even if it were not necessary we would do it at any rate.

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It must be borne in mind that the two operations are the exact antithesis of each other, reducing iron in the blast furnace and forming clinker in the rotary kiln. The one product is a reduced metal while the other should be a series of oxides in as high a possible degree. *The rotary kiln gases are just an oxidizing gas as state of oxidation as the blast furnace gases are reducing.*

Compare the analysis of the one to the other.

Rotary kiln gases taken from a 60' <sup>long</sup> kiln while "working" good.  $\text{CO} = 0.2\%$ ;  $\text{CO}_2 = 10.2\%$ ;  $\text{O} = 11.8\%$ ;  $\text{N} = 77.8\%$ .

Note the percentages of Co and  $\text{CO}_2$  also the larger excess of oxygen, indicating a large excess of air and of course consequent loss of heat.

Blast furnace gases under good working; average composition of good working:  $\text{Co} = 27\%$ ;  $\text{Co}_2 = 14.5\%$ ;  $\text{N} = 58.5\%$   
One single case:  $\text{Co} = 23.7\%$ ;  $\text{Co}_2 = 13.7\%$ ;  $\text{N} = 63.1\%$

Note the percentage of Co and  $\text{CO}_2$  and of course no free oxygen (The relative volumes of Co and  $\text{CO}_2$  mentioned in Mr. Edison's letter are simply reversed.)

The rotary kiln gases will support combustion. The blast furnace gases will not; but can be burned. They are exactly opposite. Indeed the blast furnace gases might be used to burn portland cement clinker. How then can combustion of coal in one case be cited as an illustration of proper working in the other case?

Concerning the length of the time required for the interior of a one inch cube to become as hot as the outside, it may require but a few minutes but as explained before, air or oxygen is required also. Mr. Edison says that reason so many clinkers come through the kiln with centres which have never reached the tempera-

W.H.M..... 12.

ture of the zone, is that the outside was continually reaching coatings of low temperature chalk". How does this account for the fact that we have had such soft centre clinkers when there was no chalk ring noticeable and certainly no avalanching of chalk? And usually when we did have such chalk avalanching, the clinkers had a rusty appearance on the outside and did not necessarily have soft centres. If soft centres were due to cold coatings of chalk, we could not expect the clinker to have such a good crystalline exterior which it often has with soft centres. With the load of clinker extending fully fifteen feet from the coal end, we have gotten soft centered clinker. The claim is made to explain the formation of such clinker; the soft clinker ball existing at about 35' from the coal end it advances for about ten feet through what I believe to be the most critical part of the operation at a too rapid rate for the interior to be properly burned; a somewhat harder shell is formed during its travel of this distance preventing the free burning of the interior and the coating or outside shell becoming harder and harder as it comes on through the last twenty five feet of the kiln to the coal end; the chance of the interior becoming burned thoroughly is lessened as it nears the coal end; practically no chance after it has come to within ten feet of the coal end. I consider that portion of the kiln from the time you find the surface of the balls taking on the least degree of evenness and cohesion up to and including that portion of the kiln where the shell begins to show indentations due to the first shrinkages, to be the most vital or if I may say, the most critical.

W.H.N. .... 13.

Hurried through this zone faulty combinations may ensue; its certainly does no good to hurry it. If the atmosphere has nothing to do with the formation of correct cement clinker and if the centre of an ordinary piece of clinker becomes heated to the same degree as the exterior in a few minutes, why then does not the clinker formed at twenty feet from the coal end, become completely and correctly formed in its travel through this twenty <sup>feet</sup> the hottest part of the kiln, consuming 12 to 15 minutes time? Air is needed, and if you have reached the maximum amount allowable then there remains more time which can readily be given it; prolong the time for action of heat and air, i.e., slow the kiln. Slowly revolving the kiln, brings about the reactions more gradually, which surely cannot be a detriment and there is less liability of faulty combinations ensuing. Suppose we had two chalks (A) with following percentages in the different rocks, constituting cement rocks of two classes: in one silica = 19% another rock silica = 15%. The carbonate mixed with the above containing 2% silica. (B) cement rock of two kinds; one had silica = 16%; the other 14%. The carbonate had 10% silica. Each chalk mixture made so as to have the same compositions empirically and ground to the same degree of fineness. Heating each alike will not give clinker of exactly like composition structurally. The more quickly they are formed the less will be their resemblance. Certain it is, if formed slowly and gradually they can be brought into closer similarity in every respect.

It might be argued that the clinkers would be the same in every respect, but it is not true. Without going into details,

W.H.M. .... 14.

consider chalk A at 35' from coal in one kiln. Chalk B at 35' from coal end in another kiln. Kilns exactly alike; all other conditions similar. At what distance from the coal end do they become alike? But of this more will be said again, details of this not being pertinent to the question herein involved. Suffice to say for the present that they can be made to more closely resemble each other by causing them to react more gradually.

It was not meant to have the clinker heated to softening for any great length of time. After the clinker is once formed completely further heating serves only to deteriorate it, slagging it in fact, if heated too long, destroying its hydraulic properties and rendering it <sup>like</sup> so much glass as far as setting properties are concerned. You may remember that we had some "Dead" cement shortly after we began manufacturing last October. This was due to the overburning of the clinker. By the statement of violent manufacture, which I mentioned was meant relatively violent, and it applied chiefly to the reactions in the critical zone of the kiln. I believe, however, if the materials were held in the plastic state for an hours duration there would be separation of the molecules and some further changes not ordinarily to be had in clinker. But we do claim that slow formation of the clinker gives better results than that formed more quickly. Take any two chemical compounds, you almost invariably secure a more stable resulting product by causing them to react gradually, the slower the better. Hurrying the reaction does not tend to form the most stable <sup>resulting</sup> compounds.

Or to give a more practical case of manufacture, Mr. Edison went to the iron industry to cite instances in establishing

W.H.M..... 15

*into, let us go a little beyond the blast furnace. The product of*  
certain blast furnace is pig iron which we wish to convert into steel. The two chief ways of doing this are the Bessemer and Open Hearth methods. The one requires about 12 minutes during time of reaction. The other requires about two hours during time of reaction. We then have two steels, Bessemer and Open Hearth, and I believe it is generally conceded even in cases of identical composition that Open Hearth steel is better in every respect than Bessemer. More time is consumed during its formation, during the vital period of its construction. This is not only the generally accepted opinion among engineers and manufacturers, but is supported by metal lurgists, as Metcalf, Campbell and others.

Or better still, stay right in our line of business, the cement industry. Note the reactions of the cement itself. A cement which sets slowly, is generally speaking, stronger and better than a quicker setting cement. More time is required during its critical<sup>re</sup> action with the water. The slower the better.

In conclusion, let it be said a permanent and fixed slow speed is not wanted,, to be the best, but the above arguments and refutations of statements are made in defense of more slowly burned clinker.

Concerning the much mentioned avalanching of chalk, I must say I have not noticed as much of it as I have heard of. I have seen it at times, in one instance sufficient to be serious; but I hardly think it is guilty of all the accusations against it. There are about a half dozen or more factors entering into the formation of

W.H.M. .... 16.

clinker, and all the faults have been put to two or three factors only. Let me ask how can you expect the same reactions to take place with chalk feed screw at say 60 R.P.M., and kiln makes a revolution in 35 seconds in one instance; and in another have the chalk feed at 90 R.P.M. with the kiln at same speed, the chalk the same in each case? It is impossible.

Finally it is understood that some of the defects due to imperfect clinker can be in a manner atoned for by fine grinding and by storage of the resulting cement. However, healing this penance may be, innocence is the more desirable.

For stability in any thing, build slowly.

Yours truly,

(signed) Edward Dinan,

E.P.D.

Chemist.



ADDRESS ALL COMMUNICATIONS TO THE COMPANY



# High Portland Cement Co.

HIGH GRADE  
PORTLAND CEMENT.

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C. WELLSTON, OHIO.

*Allentown, Pa.* April 28th, 1904.

Mr. Thos. A. Edison,  
Orange, N. J.

Dear Sir:-

I was in Philadelphia yesterday with Mr. Gerstell, Vice President of the Alpha Portland Cement Co., and visited Howson & Howson, patent lawyers, also Mr. Pusey, the lawyer whom the Alpha have retained. We went into the records of patents on pulverized coal, and particularly the application of Mr. Roseberry and myself in the year 1898, about 5 months previous to the Atlas making application, (which was refused) We retained Howson & Howson to work on this case with Mr. Pusey, and in talking over things, both Mr. Howson and Mr. Pusey were of the opinion that it would have great bearing with the Judge if you would give your personal opinion. These two lawyers, with Duncan & Duncan, of New York, who are the lawyers for the Atlas Co., would be willing to come to Orange and meet you at your laboratory and take your testimony. It would not be necessary for you to go into Court.

I think you will realize that it is very necessary that we should all do out utmost to win this fight, as it would effect all of us materially should the Atlas obtain judgement in their favor. May I not write Howson & Howson and Mr. Pusey and inform them that a meeting at your laboratory to take testimony will be satisfactory? This would

LEHIGH PORTLAND CEMENT CO.,  
ALLENTOWN, PA.

Sheet #2

Mr. Thos. A. Edison.

4/28/1904.

probably be arranged for some day next week, or week after.

Awaiting your reply, I am,

Yours truly,

  
Manager.

Atlas Co. vs. Alpha Co.

April 29, 1904

Mr. Charles A. Matchum,

Mgr. Lehigh Portland Cement Co.,

Allentown, Pa.

Dear Sir:-

Your favor of the 28th inst. has been referred to me. Mr. Edison is entirely willing to give you a deposition in the suit if, in his opinion, he could do this effectively. For this purpose, he suggests that you should send me a copy of such testimony as may have already been taken, together with copies of such patents and publications as you may rely on to invalidate the Hurrey and Seaman patent, in order that I may look into the case and advise him of its present situation.

Yours very truly,

FID/DM.

Atlas Co. Suit.

May 10, 1904.

Thomas A. Edison, Esq.,  
Orange, N. J.

Dear Sir:-

Suit has been brought by the Atlas Company against the Martins Creek Portland Cement Company, but the defense is evidently being handled by the Lehigh and Alpha Companies.

The defendants make use of a coal burning apparatus wherein air pressures of from 4 to 8 ounces are used supplied by a Root blower. The Hurry and Seaman patent No. 645,031 of March 6th, 1900 describes a high pressure apparatus, the patent referring to "20 pounds to the square inch, or thereabout". The under-lying feature of the invention is in injecting a core of pulverized coal and air insufficient to support combustion and drawing into the kiln a surrounding envelope of hot air to make the combustion perfect. The patent says: "So far as we are aware, we are the first to successfully and practically burn cement material into cement-clinker by the use of pulverized carbonaceous fuel injected into the rotary furnace by means of an air-jet". So far as I can determine, this statement is correct, and the Hurry & Seaman patent does, in fact, represent the first suggestion of the use of pulverized fuel in a rotary cement kiln. The Atlas people, therefore, are seeking to have the patent construed as broadly cov-

T.A.E. 2.

ering all rotary cement kilns in which pulverized fuel is injected longitudinally of the kiln, the necessary air to support combustion being drawn in by the injective action of the blast and by the natural draught through the kiln. The defenses which are being urged are:

First - None-infringement. (a) Because the patent must be limited to a process using a high pressure like that produced by a piston compressor as distinguished from a low pressure produced by a fan or blower, (b) because the patent is limited to a separate combustion chamber connected with but independent of the kiln itself and (c) because with a low pressure blast there is more or less impingement.

Second - Lack of invention. (a) Because the desirability of securing a heating effect in an open space by radiation rather than by impingement of the flame on the material treated, has been recognized ever since the invention of the Siemens regenerative furnace, (b) because in view of the prior suggestions of burning gas or oil the possibility of burning pulverized fuel in the same way would be obvious and (c) because pulverized fuel has in fact been burned in other furnaces, and no invention would be required to use it in a rotary cement furnace.

So far as the defenses (b) and (c) on the question of non-infringement are concerned, I think they are without force, since there seems to be no evidence that there is impingement of the flame in the defendants' apparatus, nor does the separate combustion

T.A.E. 3.

chamber appear to be regarded in the patent as essential. It is possible that the Court might limit the patent to a high pressure device and thereby allow the present defendants to escape, but this would evidently not help the Edison Company.

The defense of lack of invention may be persuasive, although the 'man' who first accomplishes the desirable result is favorably considered by the Courts. Yet if it could be shown that when the price of oil was increased, the use of pulverized coal was immediately taken up that fact would indicate a degree of obviousness.

On the whole, I am impressed with two things, first, that this is a very dangerous case and, second, that Mr. Duncan, attorney for the Atlas Company, is an exceptionally able man in this art and very much more familiar with the subject than Mr. Pusey, who represents the defendants. There is the danger in your giving a deposition that, going into the case that you are not familiar with the details of and without full preparation, admissions might be secured by Mr. Duncan, which would embarrass you in the event of a suit against your Company. On the other hand, a deposition from you would carry great weight because of your reputation and of your familiarity with the art. Even if the patent is not invalidated but if the suit is decided against the Atlas Company on the ground of non-infringement, there would always be a certain moral weakness in the Atlas case. It was therefore undoubtedly a tactical mistake on the part of Mr. Duncan to bring the suit against a low pressure

T.A.E. 4.

apparatus rather than against a high pressure apparatus. Should you give a deposition it ought not, in my opinion, go beyond these points:

1. A reference to the well recognized engineering practice of securing a heating effect by radiation as originally suggested by Siemens.
2. An expression of your opinion that in view of the use of oil and gas, the employment of pulverized coal would be obvious.
3. The well recognized possibility of using a blast of pulverized coal as a substitute for gas or a blast of oil.

A deposition strictly confined to these points could not, to my mind, be hurtful, although if you read the cross-examination by Mr. Duncan of the witnesses Gerstell, Grenall and Brooks, you will see the kind of a cross-examination that you will undoubtedly be subject to.

Yours very truly,

WLD/ML.

478<sup>11</sup>  
2

5. Ersson Spence  
New York, May 10th 1868

Dear Mr. Spence



When I last saw  
Mr. Ersson on Saturday he told  
me to first start from the German  
Periodical, Anglo & Physicochemical  
Journal, as far back as 1840, as  
he was under the impression, that  
the German had first made use of  
powdered coal in furnaces for heating  
ores. But I think this is not the  
case. At least up to 1866, which I  
readed yesterday, there is not a trace  
to be found of such use, for coal dust  
(waste) is not powdered coal that proves  
a failure whenever used upon grates etc.



We must, I think, stick strictly in  
this regard to: stiff, fairly good  
or impalpable power of coal as fuel.  
As I have not anything to report  
to-morrow, it is useless for me to  
come to Orange, but I hope by next  
Saturday to be able to submit to  
you something interesting.

Very truly yours  
Hemi Halsey

May 23, 1904.

Hurry & Seamen Patent.

Mr. Henri Hatch,  
5 Sheridan Square,  
New York City.

Dear Mr. Hatch:-

Your favor of the 20th inst. has been received. I think you will find all work in connection with powdered coal to be subsequent to 1866 and possibly later than 1880. I don't quite understand the distinction which you draw between "coal dust" and "powdered coal". Of course, if the dust carries considerable quantities of slate and other non-carbonaceous material it would not answer the purpose, but otherwise I see no distinction between coal in a natural pulverulent form and coal which has been purposefully powdered.

Yours very truly,

FLD/MH.

5. Shoreline Square

Dear Mr. Lyster



I was disappointed to learn on Saturday, that you were absent and left my first report with Mr. Holden, who promised he would hand it over to you as soon as you come back from Canada.

Mr. Edson has read the report & told me to make during this week in the Astor library as many sketches as I can find there with reference to this search & to try eventually to find the German patents of the English inventor (Simms etc) which are perhaps fuller. I will do my best, starting in to-morrow. Should that

proof un satisfactory, Mr. Edison  
thinks I should go to Washington  
& look up the 22 German Patents  
on Portland coal furnaces etc with  
all drawings I can secure, as the  
Astor library has only small abstracts  
& almost no drawings at all.

Unfortunately I could examine the  
file of this H & S. patent for  
the 4 years, between date of appli-  
cation & date of delivery of patent.  
(1896-1900). -

I wanted to keep you posted  
of what has occurred during your  
absence.

Yours faithfully,  
H. Hatfield

Wm. H. TREMPER, JR.  
PRESIDENT.

J. B. MALLORY,  
VICE-PRES.

W. R. TULLIN,  
TREASURER.

THOMAS A. CHASE,  
MANUFACTURER.

THOMAS A. BRIDGE,  
CHIEF MANAGER.

TRADE MARK  
*Thomas A. Edison*

## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

June 23, 1904.

IN RE Literature, etc:

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.

Dear Sir:-

Under separate cover, I am sending you today, such literature as I expect to be of use to you in your studies on the rotary kiln. I will leave them in your own good care as long as you wish and will be pleased to furnish you any others which come to my notice. Also should you at any time come to any reference to a technical paper, have in mind that I live close to the Lehigh University Library, which is open day and night, <sup>Sunday as well</sup> and where most of the leading technical journals can be reached.

You will note the interesting figures on page 68, Vol. 12, No. 5; compare with the results obtained at the Alpha Plant. Newbury took care to allow no coal to be blown in while cooling. At any rate you will see how far forward the raw material travels undecomposed.

Get, a clear conception of the changes occurring to the chalk during its passage through the kiln. The ash of the coal is not considered in the case cited; it will have its effect, although it is slight. Note that 100 lbs., chalk gives about 64 pounds clinker and 36 pounds gas.



Mr. F.L.D.....2.

Here are a few thoughts on the subject as a whole:

Old stationary kiln practice with heating like in a limekiln, consumes as low as only 50 pounds coal per barrel cement.

From Rathbury & Spackman, cement Engineers, of Philadelphia, I read under the description of what they term their type of rotary kiln (1902) (ordinary 60' kiln like any other).

"The capacity and coal consumption of a rotary kiln varies with its size and nature of the raw materials burned, the former being from 125 to 200 pounds cement per day of 24 hours, the latter from 100 pounds to 175 pounds per barrel of cement produced."

Best 60' practice cannot come under 105 pounds. I note *actual practice* figures a few years ago, for 60' kiln; 200 ~~pounds~~ <sup>seconds</sup> in 24 hours; 134 pounds coal.

The 100 and 105 pounds you hear of is the best *any one can do*

Look at 60' kiln and you notice regular puffings, continuously i.e., the smoke rolls out and then for a moment at intervals of 6 to 8 seconds it "flares" up and then quiets; ~~then~~ <sup>when you again see a puff</sup> slow roll of smoke for about 6 to 8 seconds. Edison kiln shows nothing like this, the Edison shows a constant outpouring of smoke.

It is the exception to have clear smoke with a 60' kiln under hard driving. You nearly always find the smoke dark. It is remarked when clear.

In 60' kiln you notice when kiln working with a good load, intermittent rumbling with puffing of gas out of the front openings

Mr.F.L.D.....3.

(at coal end) of the kiln. You do not notice this with Edison.

You nearly always notice the smell of hydrogen sulphide  
( & sometimes sulphur dioxide) about the rear of the 60' kilns.

This indicates unoxidised sulphur <sup>a.e.  $H_2S$  smells like rotten eggs</sup> escaping or when the sulphur dioxide is noticed, it indicates it <sup>is</sup> being burned, probably just as it leaves the kiln, *coming into the air.*

Complete combustion would allow no hydrogen sulphide to escape.  
A more thorough heating is insured with Edison kiln.

Edison handles a larger mass under heat and thereby saves heat otherwise necessary to heat the surroundings. This not only insures a better reaction between the molecules, but saves heat.

In a 60' kiln, about one hour is required for passage of material through kiln. In 150', about one hour and 40 minutes; depends on speed of rotation and pitch, but an hour is about right for average 60' kiln, which on an average make a revolution in  $1-1/4$  to 2 minutes, while Edison revolves in about 30 to 40 seconds at present.

Lathbury & Spackman, say under the chemical and physical properties of portland cement (1902). "Notwithstanding the brilliant investigations of noted scientists, the chemistry of portland cement is a subject not thoroughly understood. By long experience in its manufacture, we are able to draw from the results of many analyses the safe limits of the essential ingredients but the manner in which these simple ingredients are bound together, and the changes they undergo during the setting of the cement, are not clear."

Mr. FLD.....4.

In considering what takes place in the travel of raw material through the kiln to clinker note the following figures. The analysis taken if from one in actual practice. What is to occur in burning is worked out theoretically and practice comes very close to the figures given for calculated composition of clinker:

<u>In 100 lbs., raw material we have</u>	<u>Changes during burning</u>	<u>Left after burning 100 lbs.</u>	<u>Gives clinker of composition</u>	<u>calculated</u>
<u>lbs.</u>		<u>lbs.</u>		
Silica 13.67	None	13.67	20.79	
Oxide of Iron 2.09	"	2.09	3.22	Which
Alumina 5.59	"	5.59	8.63	is
Carb. of Lime 74.46	44% goes off as gas; leaving lime	41.70	64.38	pulverized to cement
" Magnesia 3.60	52.4% goes off as gas; leaving mag'a	1.72	2.65	
Moisture organic matter etc. .59	All lost altogether	0.00		
100.00 lbs. - - -		64.77 lbs. clinker		

The ash in the coal has not been considered; it will have its effect although slight.

Kiln No. 7, July 6, 1899, Alpha, 60' long. Material in kiln noted after kiln had been shut down for 4 days. Was allowed to cool with very little turning. Beginning at the coal end the following was noted in going through.

Clinker changing from hard to the soft lumps or accretions beginning a few feet from the mouth back to 14' where no cohering masses were found. A yellow powder beginning at 10' continuing to 20', i.e., overlapping 4' of the beginning clinker formations. From 20 and 30' the



Mr. F. L. D. .... 5.

change from a yellowish to a darker powder noticed: although at 40 there was still some yellowish powder. From 40 where there exists some

yellowish powder a change to pure dark undecomposed material was evident,

showing no signs of decomposition whatever, — which continued to the very end. Although surrounding the field area & on the walls of the Stockade, the material was decomposed by the heat.

A little allowance must be made for a slight forward movement

of the material while the kiln is turned during cooling.

This was a bottle shaped kiln; diameter from front to 33'

being 5'8"; between 33 and 38 the kiln tapers to internal diameter of

3'8". Diameters measured with brick in, of course.

*Another case—  
Samples taken every 5 ft from  
Apple Kiln No 3 Nov. 27-1900*

No.	Insoluble Siliceous matter.	Oxide of Iron and Alumina	Lime	Magnesia.
1	22.30	8.00	21.02	0.99
2	19.88	10.20	61.41	2.76
3	19.24	8.50	50.72	2.22
4	18.24	8.38	57.52	2.51
5	17.56	7.12	53.04	2.28
6	16.42	6.30	48.51	2.39
7	16.94	3.66	44.01	1.82
8	16.94	3.60	42.82	1.70
9	17.28	2.44	43.16	1.78
10	17.28	2.46	43.03	1.73
11	17.16	2.70	42.98	1.62
12	17.10	2.30	43.16	1.71

*check* *check* *check* *check* *check* *check* *check* *check* *check* *check* *check* *check*

Carbonate of lime  $\times 0.56 = \text{lime}$  //  $\text{lime} \div 0.56 = \text{Carbonate of lime}$   
 " " Magnesia  $\times 0.476 = \text{Magnesia}$  //  $\text{Magnesia} \div 0.476 = \text{Magnesia}$

Mr. F.L.D. ....6.

*In check the lime and magnesite are present as carbonates although I have given them as oxides - the actual amount of oxide present. The oxides do not of course change. The  $\text{CO}_2$  is simply driven off.*

The amount of carbonic acid ( $\text{CO}_2$ ) was not determined but was present in all samples except No. 1. It was of course, greatest in No. 12 the fresh raw mixture in the kiln, about 34% and decreased as the samples read from No. 12 to No. 1 where practically none was present.

Coal dust was also present, having been blown in and becoming mixed with the material. Coal was found in decreasing amounts from No. 1 to and including No. 4:

Sample No. 1 contained a great deal of coal as might be inferred from the analysis given. This came from the last unconsumed coal blown in as the kiln stopped; no doubt some of it came from the few rotations given the kiln in cooling. This must have taken place to a little extent as you notice the material from No. 12 forward to No. 8, 30', showed practically no decomposition. Thirty feet is a little too far from the rear end to go undecomposed.

At any rate count on this: it is the unusual condition in 60' kiln practice to have clear smoke issuing from the stack. A kiln is said to be working very nice and is not hustling when emitting clear smoke. So that there is usually throughout the kiln unconsumed carbon. Some of this gets mixed with the material and comes on towards the front of the kiln again while its combustion occurs while mixed with the chalk and the then forming clinker. *We do not notice this in the Edison kiln, although it cannot occur along about 60' from the rear end.*

As anything new occurs to me, I will send it to you promptly.

Yours very truly,

E.F.D.

*Edvard D. Dineen*  
Chemist.

W. H. HERRINGTON,  
PRESIDENT.

W. H. HALLIDAY,  
SECRETARY.

W. B. DILLING,  
TREASURER.

THOMAS J. CLARK,  
RECORDS.

THOMAS A. HENSON,  
CHIEF MANAGER.



## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

June 27, 1904.

IN RE Cement:

Mr. F. L. Dyer,  
Edison Laboratory,  
Orange, N. J.



Dear Sir:-

The temperatures at base of stack in 60 ft. kilns are close to 1300 degrees F. In actual practise the following figures were taken:-  
1480- 1380 - 1050 - 1290 - 1050 - 1400 - 1620; average 1330.

By Edison removing so much C.O.<sub>2</sub> so far back as he does the amount of chalk (then carbonated) is so great as to account in a large measure for the increased efficiency. That is if you decarbonate (only) chalk in one 60 ft. kiln, and then fed it into another, 60 ft. kiln the output of this other would be much more than is the case at present- of feeding the chalk in and completing the work in one 60 ft. ; For example:- A good 60 ft. kiln can clinker 200 bbls. in one day. That means about 120,000 lbs. of chalk consumed; and means also that 40,000 lbs. gas  $\leftarrow$  C.O.<sub>2</sub> must be driven off. This is usually accomplished with escaping gases of a temperature of 1300° F. Also the reaction takes place suddenly i.e. the C.O.<sub>2</sub> being driven off and the clinkering being done immediately afterward.

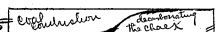
The size compels a short reacting zone; compels the coal to be consumed in a short length of kiln.

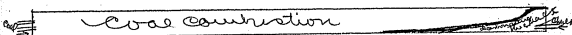
With Edison kiln, we have say 700 bbls. per day; this means 420,000 lbs. of chalk consumed and means 140,000 lbs. gas C.O.<sub>2</sub> driven off.

Mr. F. L. Dyer. -----No. 2.

The escaping gases are of a lesser temperature than in the case of the 60 ft. kilns.

The length of the kiln favors a more gradual calcining of the chalk and thereby lengthens the part of the coal combustion. These differences may be illustrated:-

coal  chalk 60 foot Kiln

  
EDISON KILN

On this scale there seems to be hardly any comparison between the two kilns. The one of the Edison may ~~be~~ <sup>have</sup> been taken under most favorable circumstances but the point I wish to make is to show us that a far greater zone of reaction prior to clinkering - where <sup>transiently</sup> no  $\text{CO}_2$  is being evolved from the material.

It looks to me as if we may say we have a kiln within a kiln.

That is our last half (from the coal end) may be termed a calcining kiln; the first half a clinkering kiln. In short it appears to me as if Edison has accomplished what was attempted by others as you may notice in the book - "The Cement Industry" - p. 188 to 199. In the second paragraph p. 194 you see how Mr. Giron tried to get rid of  $\text{C.O.2}$  before burning - so as to increase his output. His process was not practicable. Edison's certainly is.

Yours truly,

Edward Dyer

Chemist.

E.P.D.

Wm. H. RICHARDSON,  
PRESIDENT.

Wm. H. RICHARDSON,  
VICE-PRESIDENT.

W. H. RICHARDSON,  
TREASURER.

THOMAS A. EDISON,  
VICE-PRESIDENT.

THOMAS A. EDISON,  
VICE-PRESIDENT.

## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

July 5, 1904.

TRADE MARK  
*Thomas A. Edison*

IN 1112 Kilns:

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.



Dear Sir:-

Continuing our notes on the rotary kiln, there occurs to me the following:

My impression is that in Mr. Edison's description of ordinary rotary kiln practice the statement is made that only two sets of idlers or supports for 60' kilns are used. I am informed by the ex-assistant superintendent of the Lehigh Company, that all their 60' kilns rest on 3 idlers. He stated that many of the older companies used 3 sets of idlers before they felt safe enough in using two. And further, it was his opinion that the Atlas plant at present have 3 sets under at least some of their kilns.

Referring to your book; the cement industry, note: page 58, the picture; and page 117, figure 70; three supports are shown.

I also recall finding coal mixed with material in the 60' kiln in the middle third and possibly beyond and account for it by coal passing back unconsumed coming in contact with the cooler chalk moving forward, becomes mixed with the latter, is churned up with it and so advances towards the front of the kiln again where it is consumed.

Mr. F. L. D. .... 2.

In other words some of the <sup>coal</sup>~~lime~~ makes a little excursion before it is consumed. I noticed no unconsumed coal in our kiln, although as stated before, we made no search. It is my opinion however, none would be found. As stated before, unconsumed coal escaping seems to be the rule at the ordinary plants.

Very truly yours,

E. P. D.

Edward Davis  
Chemist.

Kilns:

July 7, 1904

Mr. Edward Dinan,

Edison Portland Cement Co.,

Stewartville, N. J.

Dear Sir:-

Your favors of the 5th inst. have been received, and I thank you for the additional information on this subject..

I am glad to have you call my attention to the fact that with the old 60 ft. kilns it has been customary to make use of three sets of supporting rollers. I was under the impression that this was not the case, as I had assumed that the warping of a wrought iron kiln would prevent more than two sets of rollers from being used.

If you will let me know when the kilns are running smoothly, I will arrange to come up to Stewartville sometime when you are not too busy to take up these questions with me.

Yours very truly,

FLD/AM.

Wm. H. STEWARTSON,  
PRESIDENT.

A. MALLORY,  
VICE-PRES.

W. B. TULLING,  
VICE-PRES.

THOMAS A. EDISON,  
VICE-PRES.

THOMAS A. EDISON,  
VICE-PRES.

TRADE MARK  
*Thomas A. Edison*

## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

IN 212

Kiln:

July 12, 1904.

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.

Dear Sir:

There occurs to me another feature of the Edison kiln.

In the reaction of clinkering there occur reactions which cause an evolution of heat. That is after the materials are raised to a sufficiently high temperature the combination ensues, and during this combination there is a considerable evolution of heat; so much in fact that if it were possible to prevent all loss by radiation and conduction, were we to erect say a cylinder and fill it with chalk and then raise the temperature of the mixture at the bottom to the clinkering temperature, the reaction or clinkering of all the rest would proceed with but a very little addition of outside heat. That is after it were once started only a very little extra amount of heat is necessary to be added continually for the completion of the reaction.

From this it occurs to me that with our large volumes of kiln we more readily get the benefit of this heat of combination, i.e., we have a field in which it may work — the large amount of material coming after it-taking up this heat.



Wm. H. STEWARTSON,  
PRESIDENT.

A. MALLORY,  
VICE-PRESIDENT.

W. R. FILLING,  
TREASURER.

THOMAS A. EDISON,  
MANAGER.

THOMAS A. EDISON,  
SUPV. MANAGER.

TRADE MARK  
*Thomas A. Edison*

## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

IN RE

Kiln --2--

Even if there were no heat of combination there is a greater ~~conservation~~ <sup>reaction</sup> of heat with the much larger mass of material under reaction, which we handle.

In short our Kiln affords a better chance for getting the benefit of the heat of combination during clinkering and in this is greatly different from the ordinary kiln.

The more I think over this the more convinced I am that this point is an important one. Not about the bigness of the kiln or load it carries, affording a larger field for work for the coal — but the chance afforded for the absorption of so much of the heat of reaction.

I trust the point I wish to make is clear to you.

Yours truly,

*Edward Dineen*  
Chemist.

July 13, 1904

Edison Kiln:

Mr. Edward Dinan,  
Edison Portland Cement Company,  
Stewartsville, N. J.

Dear Sir:-

Your favor of the 12th inst. has been received, but your point is not quite clear to me.

I do not see how it makes any difference, so far as economy is concerned, whether the heat in the kiln is due to chemical combination within the mass or to the combustion of the coal. Whatever may be the reason for the high efficiency of the Edison kiln, I do not see how the two sources of heat can be disassociated, and I wish therefore that you would make your point clearer if possible. Of course, I appreciate the fact that with the Edison kiln we increase the radiating surface only about 50 per cent, while we increase the load of material 400 or 500 per cent. Thus we provide a much greater relative mass of material for the absorption of heat. Has this anything to do with the point you now make?

Yours very truly,

FLD/MM.

Wm. H. PEARLBERGER,  
PRESIDENT.

W. B. MALLORY,  
VICE-PRESIDENT.

W. M. FILLING,  
VICE-PRESIDENT.

THOMAS J. CHASE,  
SECRETARY.

THOMAS A. BURTON,  
CHIEF CLERK.



## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

IN RE Cement.

July 15, 1904.

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.



Dear Sir:

Your favor of the 13th is received, and on re-reading my letter of the 12th I think you understand what I mean. I judge so from the conclusion in your letter: "Thus we provide a much greater relative mass of material for the absorption of heat."

To illustrate more clearly:- (A) Take 100 lbs. chalk and place in a box of size capable of holding 3000 lbs. Now clinker this and consume an amount of heat allowing for losses, = X. (B). Take this same box and place in it 1000 lbs. of chalk and clinker it. The amount of heat needed to clinker it will be less than 10X. That is, 100 lbs. requires X units of heat, but 1000 lbs. does not require 10X units although it is 10 times the weight.

We must first supply heat for all lost by radiation, conduction, etc. in the case of 100 lbs. Then the CO<sub>2</sub> must be driven off and the temperature of the then calcined chalk raised to the temperature of reaction; then the ingredients react, the lime combining with the silica, and the other molecular changes taking place. Now when these combinations take place, a considerable quantity of heat is evolved, but in the case of the 100 lbs mass the reaction takes place so very quickly that there is practically no time between <sup>the change of</sup> the first 10 lbs. and

Wm. H. HULLMANN, JR.  
PRESIDENT.

W. H. MALLORY,  
VICE-PRES.

W. C. FILLIAM,  
TREASURER.

THOMAS L. CHAPMAN,  
MANUFACT.

THOMAS A. BERRY,  
MANUFACT.



## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

IN RE Cement --2--

the last 10 lbs. so that all this heat of combination is carried off in the gases.

In the case of the 1000 lbs. in the box, the quantity is so large that you do not raise practically all of it to the temperature of reaction at the same time; part of it closest to the source of heat reaches the required temperature first; the reaction ensues and the heat of reaction is (of course together with that from the original source of heat) taken up by the material in contact, which later then clinkers and gives out heat, which in turn is absorbed by material next in contact with it. In this way the reaction 'grows' as it were.

Of course it takes a longer time for 1000 lbs. to react than for 100 lbs. but not 10 times as long because after that part of the material which first reaches the clinkering temperature (say first bottom layer of 100 lbs.) has reacted, this heat of reaction penetrates farther up into the mass (supposing the source of heat to be from below the box) and brings about the reaction of the second 100 lbs. layer. In this way the reaction grows, and as it were increases in <sup>or few moments</sup> velocity as you ascend through the box.

What may be in a manner be practical demonstration of these statements is found in the working of an upright stationary cement kiln, built like an ordinary lime kiln -- and filled with alternate layers of coal and of chalk mixture moulded into bricks. In such a kiln as low as 50 lbs. of coal produces a barrel of cement of 350 lbs. Of course

Wm. H. RUSHBROOK,  
PRESIDENT.

W. R. MALLORY,  
VICE-PRES.

W. R. TULLOH,  
MANAGER.

THOMAS J. CHAN,  
SECRETARY.

THOMAS A. EDISON,  
TRUSTEES.



## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

IN Cement -5-

here there is less loss by radiation, and use is made of <sup>the heat of the</sup> lower products of combustion in passing up and out at the top; but also the topmost part of the layers of chalk bricks or rock immediately absorb ~~the~~ heat of reaction of the lower parts, and <sup>gave</sup> "gave it work to do" -- which would not so well be the case if the layers were not so thick.

Similarly then with our greater load we have a field for operation for this heat of reaction. We carry a larger mass of material which may be said to surround that part which is reacting, and so "soak up" as it were this heat of reaction. If we had a thinner stream or lesser quantity of material this heat of reaction would of course be evolved, <sup>it</sup> would not all be so thoroughly communicated to the material following it, but ~~it~~ more likely <sup>would</sup> escape by conduction and by being carried off in the gases.

The larger mass favors the better absorption of the heat of combination than does the smaller mass.

I trust you will understand the point I wish to make, which, however, we can discuss at our next meeting.

We have now two kilns in operation and expect the third in full operation in about a week.

Very truly yours,

*Edward Dineen*

Chemist.

ETD.

July 19, 1904.

Edison Kiln.

Mr. Edward Dinan,  
Edison Portland Cement Company,  
Stewartsville, N.J.

Dear Sir:-

Your favor of the 18th inst. has been received, calling my attention to the fact that on page 110 "The Cement Industry", dampers are described in kiln stacks of the plant of the Wm. Krause & Sons Cement Company at Martins Creek, Pa. As I understand the arrangement described, the combustion gases pass normally from the kilns through an underground duct to the driers, the draft in this case being maintained by a centrifugal blower. Apparently, the dampers referred to are located in the duct between the kiln and the drier. The articles states that -

"If the drier is not in use, certain dampers may be closed and others opened, causing the waste gases to pass out through the usual kiln stacks".

This is not very clear, but I do not think it necessarily means that a damper is used in the stack itself. At any rate, I believe that Edison's idea comprehends more than merely introducing a damper in the stack. He tells me that heretofore, the stacks

No. 2 Edward Dinan.

have been made of a capacity to accommodate the average or normal conditions, and that the draft has then been regulated for varying the coal feed and the injected air. If a damper were used in such a stack, it would only be of utility if the draft conditions improved, as in that case the draft would have to be choked more or less. If, however, the draft conditions became worse, no possible regulation of the damper could help matters and recourse would have to be had to the air and coal feed. With the Edison kiln, however, I understand that the stack is of much greater relative capacity, and that it is able to furnish the necessary draft under the most unfavorable conditions. Hence, as the conditions improve, it becomes possible to effect the regulation entirely by this damper by merely choking the draft to a greater or less extent.

In view of the doubt which I have as to the exact location and function of the dampers <sup>the</sup> at Martins Creek Plant, I wish you would look into the matter and advise me on two points;

First - Was there a damper in each kiln stack?

second - If so, was each stack of sufficient capacity to operate under the most unfavorable conditions?

Yours very truly,

ELD/ARK.

Wm. H. RICHMONDS,  
PRESIDENT.

W. R. MARCHANT,  
VICE-PRES.

W. R. TRADING,  
TOLSONGHER.

THOMAS I. CRANE,  
SECRETARY.

THOMAS A. EDISON,  
CHIEF MANAGER.

TRADE MARK  
*Thomas A. Edison*

## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

August 6, 1904.

IN 212 Roasters:

Mr. Frank L. Dyer,

Edis on Laboratory,

Orange, N. J.

Dear Sir:-

Replying to your favor of the 19th ult., relative to dampers in stacks of Martins Creek Cement Co's kilns, I may state that as far as I am able to learn there was not a damper in each of the kiln stacks, nor was any use made of any dampers for the securing of more efficient working of the kiln.

My information comes from an Engineer who inspected the plant immediately after its transfer to the Alpha Company. He stated the whole device for drying stone by the kiln gasses was never used, and that the description of such an arrangement, was a description of what was expected to, but did not work.

So far I am unable to locate a certain party who was connected with the company from its organization until the fall of 1902, and from whom I can learn exactly what the arrangement was.

From other sources, I feel sure, however, that no use, such as that to which we put ours, was made of dampers in the stacks.

Concerning the use of dampers by other people, I may state the only way they have of changing the force of the draught with the same coal, chalk and air feed, is by means of a door in the brick work base of the stacks. By opening this door cool air is drawn in, thereby decreasing





Mr.F.L.D.....2.

the "pull" of the stack, as you will readily understand. This is the only kind of damper I know of as having been in use.

I will continue inquiry into this matter and will advise you further.

Yours very truly,

E.F.D.

*Edward Dineen*  
Chemist

Edison Kiln:

Sept. 27, 1904

Edward Dinan, Esq.,  
c/o Edison Portland Cement Company,  
Stewartsville, N. J.

Dear Sir:-

Have the recent operations of the Edison kiln under your observation thrown any additional light on the general questions of novelty and patentability? Particularly, have you ascertained what the chemical reactions are throughout the length of the kiln? You said when we last talked over this matter that at the first opportunity you would make an analysis of the product of the kiln at regular intervals throughout its length. If you have done this, it ought to throw a great deal of light on what has heretofore been largely a matter of speculation.

In order that I may be definitely advised from actual experience, I wish you would answer the following questions:

What is the speed per minute of material passing through the Edison kiln compared to that of the old kiln?

What is the rate of rotation of the Edison kiln and of the old kiln?

How does the load in the Edison kiln compare with that of the old kiln?

Yours very truly,

Wm. H. Hurlingham,  
President.

W. H. Taylor,  
Vice-President.

W. H. Taylor,  
Vice-President.

Thomas J. Chaffin,  
Secretary.

Thomas A. Edison,  
Gen'l. Manager.



## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.  
September 29, 1904.

IN RE

Mr. Frank L. Dyer,

Edison Laboratory,

Orange, N. J.

Dear Sir:-



Replying to your favor of the 27th, inst. concerning our Kilns will state that the speed per minute is a very variable quantity. We have our Kilns No. 3 and 4 lined with corrugated brick in the rear 95 feet. This of course results in the propulsion of the Chalk, etc., in these kilns at a more rapid rate than in the case of Kilns No. 1 and 2 which are smooth lined. For this reason and because we have not fully decided upon a fixed speed of Kiln, the speed per minute of the material passing through the Kiln is not constant. Neither is it a constant at other plants, but as an average so far we may give the following figures:

Edison Kiln-Speed <sup>of load</sup> per minute---3.75 feet.  
60 foot Kiln- " " " ----0.60 "

The rates of rotation average about as follows:

Edison Kiln- 1 Revolution -- 33 seconds.  
60 Foot Kiln- 1- " --100 "

As to the average comparative loads in the Kilns the 60 foot Kiln has slightly the greater load per foot.

I have one set of samples at regular distances throughout the entire length of kiln, but regret that by reason of our closing

Mr. F. L. D.

down we have no longer the Laboratory facilities for making these analyses.

It may be well to call your attention to the fact that the speed per minute, rate of rotation, and load per foot are all variables and are adjusted to suit conditions prevailing. For the 60 foot Kiln 100 seconds can be taken as a general average, while Edison's at present are averaged about which rate however, cannot be stated as our "constant".

In any event all Kilns should be and nearly all are arranged so that their <sup>Factors</sup> ~~speed~~ <sup>material</sup> etc. can be changed at will.

Very truly yours,

Edward Duran

Wm. H. HARRINGTON,  
PATENT ATTORNEY.

W. B. MALLORY,  
VICE-PRESIDENT.

W. B. FILLARD,  
VICE-PRESIDENT.

EDWARD J. CHASE,  
VICE-PRESIDENT.

THOMAS A. EDISON,  
SECRETARY.

## The Edison Portland Cement Co.

Telegraph and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

June 17, 1905



IN RE  
Kiln: 1

Mr. F. L. Dyer,  
Edison Laboratory,  
Orange, N. J.

Dear Sir:-

I have carefully noted and studied over your letter of the 9<sup>th</sup> relative to the rotary kiln and after full consideration have the following reply to make. I will answer in the order of your paragraphs.

First: I am reasonably certain that in the Edison kiln substantially all the carbonic acid is driven off before the combustion zone is reached, and this gives us more perfect combustion. I of course do not maintain that some of the coal is not burned as far in the kiln where some carbonic acid is coming off. I do maintain that we have a very much longer zone of carbonic acid free material, over which material combustion can be more readily maintained. I am sure enough we can assert this distinction and make it a basis for our patent. Attached you will find one of the curves taken from "Cement & Engineering News" showing the changes in material as determined on samples from a kiln at the Dexter Plant. On this same sheet I have drawn the curve representing the change in material in case of an Alpha kiln in July 1899. It is about the same, so you see we are reasonably safe in stating that the changes in the 60 foot kiln are about as represented. I did not determine the  $\text{CO}_2$  or loss on Ignition in the Alpha case; this  $\text{CO}_2$  or Loss in Ignition decreases as the amount of lime increases, so knowing one we can estimate the other. It is perfectly plain that we are not crowded in our combustion zone, and that by reason of the greater volume of space free from  $\text{CO}_2$  from the material we secure a much better economy of fuel.

F.L.D..2..June 17, 1905.

However, in the face of all this, if the 60 foot kiln be run on a lighter load, or driven slower, it might be made to have a proportionately large CO<sub>2</sub> free space for coal combustion. Also if we drive our 150 foot kiln too hard, i.e., by crowding in too much material or running too rapidly we could also decrease the economy of fuel in our kiln. But in practical everyday working we have a longer zone where the material under reaction is free from CO<sub>2</sub>.

Looking at our 150 foot curve you notice we have at least 35 feet free from CO<sub>2</sub>; and our kiln is 150 feet long. Looking at the 60 foot kiln you see we have 5 to say 8 feet free from CO<sub>2</sub>.

From these figures many interesting ratios can be noted. For instance 35 to 8 is the ratio of the output per hour of the two kilns and yet the length are as 2-1/2 to 1. Better than this the output of the Edison kiln is even more than 35 bbls. per hour and although foreign to this letter I may say I believe considerably more.

Second: I cannot say that in the old 60 foot kiln the clinker is imperfect. On the other hand I know it is very often as far as I am able to judge as perfect as ours. But I believe it may be, or was, more often the case to find soft centered clinker from 60 foot kilns than from our 150 foot kilns. I did not make any experiment for Mr. Edison of removing the soft centers and examining them. I have examined such clinker however, and know that the soft centers are very poor <sup>for</sup> cement. I have taken soft "clinker" like the soft centers in hard shell clinker and found it to get mushy and soft on boiling in water after it had been set for a little time. This showed it to be poor.

This matter depends entirely on how thoroughly it be burned and it can probably <sup>be</sup> accomplished in a 60 foot kiln as well as in a 150 foot providing you go slow enough with the 60 foot, i.e., this could be done as an experiment.

Mr. F. L. D. S. June 17, 1905.

Third: I cannot at present cite any instance in the cement art where the desirability of a slow reaction has been pointed out. I think ~~however~~ it is obvious that a slower reaction is the more desirable. In chemistry in general, I may make the statement, "slow reactions for stability of resulting product". In the steel industry we have the slow and gradually made Open ~~Hearth~~ steel generally believed superior to Bessemer; the Open ~~Hearth~~ consuming about two hours and the Bessemer about 12 to 15 minutes, during time of reaction. I will <sup>try and</sup> hunt up a parallel to this in the cement industry or the Ceramic Industry and if I find any will let you know immediately. As an illustration of the desirability of a slow reaction, I may give the case of slow setting cement as compared with quick setting one. It is well known that the quick setting cement will not give the strong permanent testing mortar the slow setting one will. This is an illustration right in our own field to show the desirability of slow reaction.

I do not lay the superiority of our cement to the manner of making the clinker as much I do to the fact that it is first a more nearly neutral cement than most others, i.e., carries no excess of lime; it is a crushed cement; and by reason of the fineness to which it is ground and the manner of grinding we really produce more cement per pound of our article, and therefore there is more real cement in a given weight of Edison brand than in the same weight of the others. The tests were made by different operators working under my instructions. We have several reports from outside laboratories that are superior even to those. Do not however make any claim that the superiority shown is due to the kind of clinker - even in part; I could not give positive evidence on this point, although my opinion is that some of the qualities of our cement are from the manner of the clinker formation.

P.L.D. June 17, 1905.

Fourth: I have not determined the temperature of our stack gases, but expect to do so as well as considerable other work on the kilns, all of which information we can then furnish you. Some few years ago I took stack temperatures on 60 foot kilns and found as follows: 1480-1380-1050-1290-1050-1400-1620; average - 1330. All Fahrenheit. Newberry gives 1500°F as the approximate temperature of the inside of the kilns where it enters the base of the stack. Richards, "Tr. American Chemistry Society" January 1904 finds a stack temperature of 1508°F. In general we may give 1300° to 1500° as the stack temperature of a 60 foot kiln. The stack temperature of Edison kiln under normal working, I know to be considerably less - merely from observation. I understand of course this statement not, of course, stand and we must back it up by actual observations; but I know the red appearance of the inside of the base of the stacks for the 60 foot kilns shows it to be much hotter than the dark stack base we have. I'll attend to this matter of stack temperature very shortly and promptly advise you.

Concerning other points may be relied upon for patentability, I cannot think of any at this writing that I believe you have not covered.

As to the rate of travel of material through kilns, I was not with the Edison Company prior to July 1903. I learn however that the speed of rotations of the kiln was in December 1902 about 55 seconds. It would be proper to say the material is fed through the kiln at any desired rate common in the art. Where our kilns were normally about 55 seconds, the 60 foot were from 70 seconds up to 100 or 120 seconds, to suit the material burned and the ideas of the manufacturers. Edison can hardly say he increased his inside diameter more than any others for he has not; in fact I am almost certain some of the 60 foot kilns have a diameter greater than



F.L.D., S... June 17, 1908..

ours, and have had for some time. His shells may be larger, but the inside diameter of his kiln is not from six inches to a foot greater than any other kiln.

At the present time we are turning out about 4 and again 5 times the amount of the ordinary kiln, but where the ordinary kiln makes a revolution in from 75 to 100 seconds, the Edison kiln now makes a revolution in 30-35 seconds. So at this speed we can produce clinker where it would be impossible to do so with a 60 foot kiln.

The question of the load in the kiln is such a variable one, I do not think it would be safe for us to say we have a certain load compared to a certain load in the 60 foot kiln. We can say this, that we have a much greater load. This is obvious. At present we make about 30 bbls <sup>NOT</sup> clinker per hour and are <sup>NOT</sup> urging the kiln; we do this at 32 seconds per revolution. Now a 60 foot makes 8 bbls. clinker per hour and has a revolution in say 75 seconds.

Not having been here in 1902 I cannot advise you clearly on the point you wish, but the output of the kilns was not so much as it now is nor was it as good.

Should any new ideas occur to me on this subject I will immediately write you. Also let me know of any more questions I may be able to answer.

When you have this dressed up into shape, or about to do so, I would like to see it before you finally close on it as something might occur to me we might add or we may elaborate more clearly. Therefore if you will advise me a few days ahead I will be pleased to go over this matter in person with you.

I am sending you under separate cover two copies each of the Edison curve and the 60 foot curve. *also handwrrup article and charts*  
⑤

F.L.D..6...June 17, 1905.

One thing is certain we have 3 definite zones in our kiln in distinction to the case of the 60 foot kiln where in Newberry's article he says the change is a gradual one and we have, unexpectedly perhaps, accomplished what has been attempted before preliminary calcination (driving off carbonic acid) and then clinkering. See "Cement Industry" 1900 Page 194. "The absence of carbonic acid gas in the material facilitates wonderfully the operation of the rotary kiln" etc.

Hoping this may be gotten into shape soon, and that you understand my reasoning, which I could perhaps explain better verbally, I am,

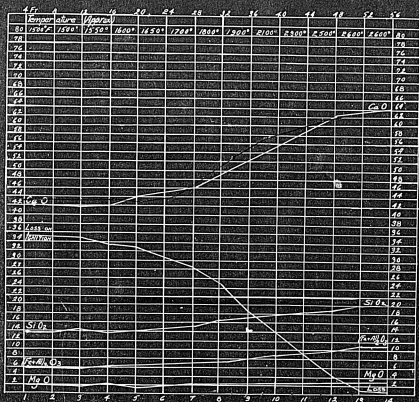
Yours very truly,

E.S.D.

*Edward Driscoll*

[ENCLOSURE]

*Lead pencil line-curve from an  
alpha 60 ft kiln*



FROM CEMENT AND ENGINEERING NEWS, PAGE 69, VOL. XII, NO 5.

*A lead pencil line-curve from an  
alpha 60 ft kiln  
P. M. ...  
60 ft kiln  
...  
...*

Nov. 18, 1905.

Walter S. Mallory, Esq.,

Edison Portland Cement Company,

Stewartsville, N.J.

Dear Mr. Mallory:-

I have carefully looked into the question of the claim of the Ore-Milling Syndicate to Mr. Edison's <sup>cement</sup> foreign patents, and find the situation to be as follows:-

The original agreement with the Syndicate does not contemplate, in terms at least, anything except the specific ore-milling patents referred to therein and improvements thereon. In 1900, two patents were taken out, one relating indirectly and the other directly to cement. The first of these patents was taken out by Mr. Edison, and ~~inter-assigned~~ assigned to the Syndicate, and the second patent was taken out by the Syndicate directly. In July 1900, Mr. Edison wrote the Syndicate that cement patents were not included "under the terms of the original contract", and he requested Mr. Dick to so advise the Syndicate. On August 2, 1900, the Syndicate wrote Mr. Edison on the point and said:-

"You will remember that in all your previous correspondence and especially in your speech to the shareholders in December last, you admit that the cement rights are controlled by the Syndicate. In your speech, after dealing with the cement works and the plant that was being erected, and

W.S.M. - 2.

the improvements that were being made in the same, you go on to urge the shareholders not to part 'with any rights for any purpose whatsoever until these two (cement) mills have demonstrated commercially the valuable rights controlled by the Syndicate'. You also go on to say that the 'experiments are being paid for from this side, the Syndicate realizing without expense.'

All these circumstances prove, without falling back on the terms of the Contract, that you regard the Syndicate as controlling all the cement rights, which naturally include the improvements."

This letter was not answered, and Mr. Edison's silence in that respect could certainly be taken as acquiescence, especially as no steps were taken by him to promptly correct the error which he states occurred in my brother's office. Apparently, nothing was done by him until June 1902, when our attention was called to the mistake, and we were requested to write the Syndicate and demand a re-assignment of the patents. On June 25th, 1902, the Syndicate wrote us as follows:-

"This matter has been duly considered by the Board of Directors, and we desire to point out that this subject was discussed as far back as July 1900, when Mr. Edison raised the question whether one particular patent should have been communicated to us.

Mr. Lawrence, the Chairman of this Syndicate, immediately wrote a long letter to Mr. Edison (copy enclosed) pointing out that it had always been completely understood from Mr. Edison's letters and speeches that this Syndicate was to have the benefit of cement patents and in 1900, Mr. Dick with Mr. Edison's concurrence and sanction, on behalf of this Syndicate, entered into negotiations in England for the sale of these patents to an important cement combine.

There are additional circumstances besides those mentioned in Mr. Lawrence's letter which undoubtedly indicate Mr. Edison's intention to hand over cement patents to this Syndicate, in which he himself is so largely interested."

W.S.M. - 3.

We sent you a copy of this letter from the Syndicate , and on July 10th, 1902, you wrote us on Mr. Edison's behalf that -

"There is no question but what the Syndicate are entitled to the Cement rights on all machinery which comes in under the contract, but the machinery and devices designed specially for Cement work and invented after the contract was made, does not go to them without further consideration from us."

Apparently, we again wrote the Syndicate on the lines of your letter, because on September 22, 1902, we advised Mr. Edison that the Syndicate had written us to the effect that -

"It has been arranged that the consideration of the matter should be postponed until Mr. Dick is next in England, when a settlement satisfactory to all parties can no doubt be arranged".

On October 24th, 1902, the Syndicate wrote a letter to Mr. Edison in which they said:-

"Mr. Dick fully explained your views with regard to the cement patents which have been communicated to us by Messrs. Dyer, Edmonds & Dyer and the feeling was at once expressed by all the Directors that there was no wish whatsoever on our part to ask you to give us any patent rights to which we are not entitled, and which might be considered not to be covered by the scope of the original agreement with the Syndicate.

We do not wish in any way to take advantage of the fact that these cement patents have been communicated to us and that we have filed patent applications on them here and abroad.

In order to recognize the principle of the ownership of the patents the Directors have resolved to offer you a percentage of profits in respect of any patent improvements invented by you being used hereafter, such improvements not being

W.S.M. - 4.

covered by the original contract, and Mr. Dick has been asked to consult with you on the matter upon his return to the United States.

We trust that you may consider this suggestion a fair one and that it may meet your wishes, but the Directors are anxious that it should not be felt for one moment that there is any desire on their part to ask for more patent rights than they are entitled to, or which you may feel willing to place at their disposal in the interests of all concerned."

The last letter on the point I find is one from Mr. Dick, dated October 28th, 1902, in which he says:-

"You will have received a letter from the Syndicate regarding the patent matter. There is on the records of the company a resolution admitting compensation to you for all patents outside the original patents and practically leaving the matter to you and myself."

The situation then is this; the Syndicate owns several patents which are admittedly limited to cement, but as they say in their letter of October 24th, 1902, their control of these patents depends upon the making of a new agreement with Mr. Edison. The cement patents thus directly owned by the Syndicate are not important. On the other hand, Mr. Edison has obtained patents, or has applications pending, in Great Britain, France, Belgium, Spain, Germany, Sweden and Norway, covering the long kiln, and corresponding substantially with the patent just granted in this country. These patents are of course, of vital importance, and as they stand in Mr. Edison's name. Under the circumstances, Mr. Edison is therefore in a strong position to insist upon an equitable re-adjustment respecting his cement

W.S.M. - 5.

patents. At the same time, of course he cannot be entirely independent of the Syndicate, because as you know they control the patents on the Giant Rolls and on the Three-high Rolls, and I presume that if any cement plant is erected abroad, these patents would have to be used. It seems to me, therefore, that in negotiating for foreign rights on cement, the Syndicate will have to be taken into consideration, but undoubtedly an arrangement can be made in which Mr. Edison's rights will be fully protected.

Yours very truly,

FLD/ANK.



BOX No. 220  
12/3

Hurry & Seaman  
M

Foot

Dec. 3, 1906.

Walter S. Mallory, Esq.,  
c/o Edison Portland Cement Company,  
Stewartsville, N.J.

Dear Sir:-

In accordance with your request I have looked more carefully into the Hurry & Seaman patent No. 645,031, dated March 6th, 1900, owned by the Atlas Company, with the view of expressing an opinion as to the probable chances of successfully defending a suit based thereon against the Edison Portland Cement Company. In connection with this consideration of the patent, I have read all of the arguments presented by counsel for both sides before Judge Archbold in the suit against the Martin's Greek Company, and I have also considered the prior art so far as I have been able to unearth it by a rather superficial examination. Without going elaborately into detail, I have reached the following conclusions:-

First: In view of the fact that prior to the Hurry & Seaman invention, the possibility of burning pulverized coal in various arts, including the art of cement manufacture had

No. 2 - W.S.M.

been suggested, no invention in a broad sense would be required to substitute a coal burner for the oil burners that were commercially used at the date of the patent. If, therefore, the patent is valid at all, it must be limited to substantially the apparatus disclosed therein, and when so considered, it is not infringed by the construction employed by the Edison Portland Cement Company.

Second: The Hurry & Seaman patent points out with great elaboration, the practical difficulties which were believed to exist in connection with the burning of pulverized coal. They evidently considered it necessary to make use of a special burner having certain peculiarities. The burner used by the Edison Portland Cement Company is radically different from that described in the patent, and does not embody a single one of the special features that the patentees considered indispensable. Your burner may possibly be the result of independent invention, for which at least no suggestion or help would have been received from the patent. For this additional reason I do not believe the patent is infringed.

Third: The patent lays a special emphasis on the fact that the fuel should be so directed into the kiln as to be located axially therein, so as to heat by radiation and not by impingement. As I understand it, with your kiln there is a very substantial impingement of the flame on the cement material, and therefore I consider this an additional reason why

No. 3 - W.S.M.

the patent is not infringed.

Fourth: The burner used by the Edison Portland Cement Company appears to be identical with the oil burners previously employed; at least, I understand it is capable of being used convertibly, either for the burning of oil or coal. This fact would indicate that the problem ~~of~~ burning coal was no different from that of burning oil, or else, that as above stated, your burner may be looked upon as an independent invention. In either case, an additional argument is presented in support of the position that your burner is not an infringement.

Fifth: Before the Hurry & Seaman patent issued, many cement plants had been equipped with coal burning apparatus, which if the Edison plant is an infringement, would also infringe. Prior to that time (March 6th, 1900) the Edison Company had constructed its model at Orange, and all arrangements were made to proceed with actual installation. To give to the patent a construction which would include the Edison plant would destroy the value of many millions of dollars of property invested in good faith before the patent issued. This presents a strong case of equity against the patent, which the court would have to consider in resolving any substantial doubts of infringement in favor of the defendant.

Sixth: The prosecution in the Patent Office was unfavorable. The application for patent was pending more than

2  
No. 4 - W.S.M.

four years and many references were cited and substantially acknowledged by the patentees as anticipating important features of their invention. A strong argument based on the history of the application on the Patent Office could be made.

Seventh: A serious question is presented whether before the Hurry & Seaman invention was made, the invention had not been independently made by Mr. Matcham of the Alpha Company. Of course, now that the Alpha Company is favorable to the patent, difficulty would, no doubt, be experienced in the production of proof on this point. I do not believe, however, that the Atlas Company could afford to absolutely obstruct any efforts to prove priority of invention on the part of the Alpha Company.

For these reason and for others which, no doubt, would arise in case a suit was actually brought, I am of the opinion that a successful defense could be made against the Hurry & Seaman patent.

Yours very truly,

ELD/ARK.

BOX No. 72

Feb. 6, 1907

Walter S. Mallory, Esq.,  
Edison Portland Cement Company,  
Stewartville, N. J.

Dear Mr. Mallory:--

When you were last here we discussed with Mr. Edison the advisability of bringing suit against the Atlas Company, and I thought it was agreed that it should be done. I therefore, prepared a bill of complaint, but upon submitting it to Mr. Edison yesterday he thought it would be unwise to bring suit against the Atlas people, because they would undoubtedly retaliate by suing us on the Hurry and Seaman patent. This point was considered by us and we thought that such a counter-suit would not be serious.

Undoubtedly, if we ever expect to do anything with our main patent we must take some steps to enforce it, because if we acquiesce too long in the various infringements we could never get a court to grant an injunction. I therefore suggested to Mr. Edison that we should bring suit against some concern outside of the combination, and he thought that would be all right. Can you name any independent com-

WHM--2--Feb.6, 1907

pany that uses the long kilns, against whom suit might be brought? Of course the weaker the concern is, the better. If you know of such a concern, let me know and I will prepare a new bill.

Very truly yours,

FDD/MJL

FORM 46

BOX No. 1

THOMAS A. EDISON

A. MALLORY,  
STEWARTSVILLE,

J. P. RANDOLPH,  
STEWARTSVILLE,

WILLIAM F. HEND,  
SECRETARY.

TRADE MARK

Thomas A. Edison

## The Edison Portland Cement Co.

Telegraph, Freight and Passenger Station, NEW VILLAGE, N. J.

P. O. Address, STEWARTSVILLE, N. J.

Feb. 7, 1907.

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.

Dear Sir:

Replying to yours 6th relative to advisability of bringing suit on the ~~coal~~ <sup>new</sup> patents, beg to state if it had not been for my sickness I should have seen you before this relative to the matter.

I have had two interviews with representatives of the North American Portland Cement Co., one of which was Mr. Duncan, Attorney for the Atlas Company, relative to these patents, particulars of which I will give you the first time I come to Orange, which probably will be on Saturday. In the meantime, do not take any action in suit until I have discussed the matter further with you.

Yours very truly,

*Wm. Mallory*  
W. P.

WSM-RBS

TRADE MARK  
  
 Thomas A. Edison

# The Edison Portland Cement Co.

THOMAS A. EDISON, CHAIRMAN OF BOARD  
 THOMAS H. DUNN, TREASURER  
 W. B. MALLORY, VICE-PRESIDENT  
 WILLIAM T. BIRD, SECRETARY  
 H. P. MELLAN, VERMONT

Telegraph, Freight and Passenger Station, NEW VILLAGE, N. J.

P. O. ADDRESS, STEWARTSVILLE, N. J.

SALES OFFICES:  
 PHILADELPHIA, PA., Arcade Building  
 NEW YORK, N. Y., St. James Building  
 PITTSBURGH, PA., Machinery Building  
 NEWARK, N. J., Union Building  
 CINCINNATI, OHIO, Post Office Bldg.  
 SAVANNAH, GA., National Bank Building

December 19, 1908.

Dear Mr. Edison:

I am attaching herewith a letter in accordance with the resolution offered by the Board of Directors. I think before you pass on this matter, it would be well to take it up with Mr. Dyer, and if necessary, Mr. McCarter, so to be sure that you are thoroughly protected, as under the circumstances, considering all that you have done for the Company, I do not think it would be fair for the other Directors to ask you to put yourself in a position where there might be any question arising as to what the Company owes you on notes and open account.

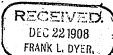
Yours very truly,

Wm. Mallory  
 V. P.

WSM-RBS

ENCLS:

*Edison*





REFER TO THIS NUMBER  
IN YOUR REPLY

309

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

Mr. Edison:

*Mallory - you can renew them for 2 years with a letter stating that they are to be paid as soon as the firm of the Co plant*  
Regarding the attached letters from Mr. Mallory, as I told you, Messrs. McGuffey & Smith advise me that if the new notes are given they will stand on the same footing as the notes now held by the banks. To meet Mr. Mallory's point, I suggest that the new notes be made for three years, with the option to the company to take them up in whole or in part at the end of the first, second or third year from their date.

Mr. Thomas M. Thompson raises the point that if anything should happen to you the company might not have sufficient time to take care of the notes which you now hold. Whether you wish to do anything in this direction is, of course, for you to say.

FLD/IWW  
Enc-

F. L. D.

JAN 9 1909

## Legal Department.

Telephone 948 Orange.  
Call to Address Call Legal Orange.

Thomas A. Edison  
National Phonograph Co.  
Edison Business Phonograph Co.  
Edison Manufacturing Co.  
Bates Manufacturing Co.  
Edison Storage Battery Co.  
Edison Portland Cement Co.  
Edison Phonograph Works

Frank L. Dyer  
Deles Holborn  
Herbert H. Dwyer  
George F. Smith  
Dyer Smith  
Counsel

Orange, N. J. Jan. 7, 1909.

W. S. Mallory, Esq., Vice-President,  
Edison Portland Cement Co.,  
Stewartsville, N. J.

My dear Mr. Mallory:

Your favor of December 19th to Mr. Edison has been referred to me relating to the resolution of the Directors of the Portland Cement Co. on the subject of making improvements to cost approximately \$112,000.00, the money to be advanced by Mr. Edison and secured by the company's notes, "to run for one year, with the privilege to the company to renew same in whole or in part twice thereafter for a similar period".

Mr. Edison seemed to have some doubt whether, if this were done and anything should happen to the company, the new notes would have the same standing as the company's notes now held as collateral by the banks. I have submitted this latter question to Messrs. McCarter & English, who confirm my own opinion, that all the notes would stand on the same footing. To make the new notes for one year, with the privilege of renewing them in whole or in part for two further periods of a year each could be fully covered by contract with Mr. Edison, but in case of his death the arrangement would not have to be carried out by his estate. What objection would there be to having the notes run for three years, giving the company the option to take them up in whole or

JAN 8 1909

(2)

in part at the end of the first, second or third year after their date? This it seems to me would fully secure the end you have in mind.

Regarding the suggestion made by the Directors, that the same arrangement should be adopted in reference to the other notes now held by Mr. Edison, that is a matter for adjustment by him, but if you wish me to I will take up the specific question with him and ascertain his views.

Yours very truly,

*Frank L. Rice*

General Counsel.

FLD/IWW

FORM 47A

TRADE MARK  
*Thomas A. Edison*  
**The Edison Portland Cement Co.**

THOMAS A. EDISON, CHAIRMAN OF BOARD  
ROBERT H. THOMPSON, PRESIDENT  
W. B. MALLORY, VICE-PRESIDENT  
WILLIAM F. HESS, SECRETARY  
E. F. MALLORY, TREASURER

Telegraph, Freight and Passenger Station, NEW VILLAGE, N. J.

P. O. ADDRESS STEWARTSVILLE, N. J.

SALES OFFICES:  
PHILADELPHIA, PA., Atlas Building  
NEW YORK, N. Y., St. James Building  
PITTSBURGH, PA., Mechanics Building  
NEWARK, N. J., Union Building  
BOSTON, MASS., Post Office Square Bldg.  
BALTIMORE, MD., National Bank Building

January 29, 1909.

Mr. Harry F. Miller, Treas.,

Edison Laboratory,

Orange, N. J.

Dear Sir:-

*Notes should be for 3 yrs  
but they are to be paid cash  
if the Company can pay  
soon; Edison*

I beg to herewith send you a letter from Mr. Dyer dated January 25th in which he states that Mr. Edison is willing to accept notes of our Company for the advances already made as well as the balance of the \$112,000 to be advanced to cover improvements and also the notes which he now holds, and I beg herewith to hand you a lead pencil memorandum giving the dates and amounts of notes held by Mr. Edison which are not discounted at your banks. These notes I have left out. Will you check over the list and advise me if it agrees with your own and if so, return it to me, and if agreeable to Mr. Edison, I will arrange to have all interest figured to February 1st, 1909 and then have new notes drawn for three years, bearing interest at 6%, interest payable annually.

Also ask please ask Mr. Edison or Mr. Dyer whether we had better have on the face of the notes the statement as to the right of the Company to pay off the notes, or a separate agreement. It is my thought that it would be better to have a separate agreement entered into by the Company and Mr. Edison by which the Company agrees that if it is in the position to

H.F.MF.

-2-

pay off the notes in whole or part any time within the period of three years, and is requested to do so by Mr. E dison, that they agree that they will do it. If we should have say two or three good years in which the Company would make a lot of money, in view of the way in which Mr. Edison has backed us up it would only be fair, if he wished it, that he should have a part of the earnings and not be compelled to wait until the expiration of the three years, and I think the <sup>option</sup> ~~objection~~ should be quite as much on his part as on the part of the Company.

I would suggest, therefore, that you take the matter up with Mr. Edison immediately and learn his wishes and then ask Mr. Dyer to put it in the form of an agreement, if it is better in that way, and then I will arrange to get out the notes and have them all fixed up before Mr. Edison leaves for the South.

Yours very truly,

*Wm. M. Mollony*  
V. P.

WSM-FBR

ENC5.

LOUIS HICKS  
COUNSELLOR AT LAW AND PROCTOR OF ADMIRALTY,  
CORPORATION, PATENT AND GENERAL LAW,  
11 MADRAU STREET, CORNER JOHN STREET.

TELEPHONE 1000 CLEVELAND.

NEW YORK, N. Y., Jan. 6, 1910

Frank L. Dyer, Esq.,  
Pres. National Phonograph Co.,  
Oranget, N. J.

My dear Mr. Dyer:-

I have your favor of January 5 and am pleased to know that you would like to go over complainant's prima facie case in the suit of Edison v. Allis-Chalmers Co., et al., brought for infringement of Mr. Edison's method and apparatus patents covering the giant rolls. I am, therefore, sending to you, by express, a copy of the testimony and a copy of the drawing illustrating the defendants' plant at Pekin. I do not think that you will find it necessary to have any of the other exhibits. The following statement in regard to the testimony will assist you.

Messrs. Williams and Hartigan (pp. 2, 56) made the drawings and have described the Pekin plant fully as it was before suit was brought. Mr. Herter (p. 105) has described the Pekin plant in operation after suit brought. Mr. Klotz (p. 143), whose testimony I took as part of our prima facie case only because he happened to be here, has testified to the advantages of the giant rolls over gyratory crushers. Mr. Mason (p. 150 and p. 249) has testified as to the construction and method of operation of giant rolls, showing that the giant rolls of defendants' Pekin plant must operate like the New Village rolls. Mr. Bentley (p. 199) has testified as an expert, explaining the inventions of the patents in suit and that defendants' Pekin giant rolls embody those inventions. Stipulations (pp. 57 and 217a) have been made completing the proof connecting the different companies, namely, the Allis-Chalmers Company, The Casparis Stone Company and the Empire Limestone Company, with the Pekin plant and with the infringement charged in the bill and showing (p. 221) that on October 10, 1907, you warned the Allis-Chalmers Company against infringement of the patents in suit. Mr. Stephens, whom I could not keep within reasonable limits, has testified (p. 224) fully to the effect that representatives of the Casparis Stone Company and the Allis-Chalmers Company inspected the giant rolls at New Village and at Sibley, Mich., obtaining detailed information in regard thereto and explaining how it was that defendants were able to make such Chinese copy of the Edison giant rolls.

Mr. Edison, Mr. Bentley, Mr. Mason and I have gone pretty fully into the principles and theories of the rolls, principally for use in rebuttal, if necessary. So far Mr. Mason and Mr. Bentley have not gone into any extended discussion of the principles of the rolls, stating only enough to make out a clear prima facie case. Mr. Edison is the one who has a clear, comprehensive grasp of the principles of the rolls and the ability, by apt and striking illustrations, to explain those principles. Mr. Edison has stated that he would be willing to testify in rebuttal should I request him so to do, and I have the question of Mr. Edison's testimony under consideration and, therefore, state the fact in order to obtain your views. Of course, this question must at all events depend largely upon the case made by the defendants, who, I expect, will begin the taking of their testimony this month, probably in Chicago at Mr. Sherman's office.

Jan. 6/10.

The defendants have set up in their answer 100 or more United States and English patents. I have gone over these carefully as far as they appeared to have any relevancy whatever, but have found nothing that can be regarded as an anticipation. Mr. Bentley is of the same opinion, although his examination has been very superficial. Prior patents show friction clutches, slipping connections, rolls with knobs, rolls with lower and with higher knobs, even rolls with low knobs and two rows of high knobs on opposite sides, rolls with plates of different kinds, all sorts of rolls, but none of the patents of the prior art show massive rolls breaking rock by kinetic energy, or, in other words, rock fed periodically to massive rolls. Mr. Edison seems to have been the first to run massive rolls up to a high speed, then to deliver blows from the rolls to break the rock and then to crush the rock, performing the breaking and crushing by kinetic energy, and then to run the rolls up to speed again and repeat the operation.

I do not know what, therefore, the defendants rely upon. Some questions put by Mr. Wilkinson upon cross-examination of Mr. Mason (p. 159) and of Mr. Stephens (p. 240 et seq.) would indicate that Mr. Wilkinson may have in mind an attempt to prove anticipation or two years prior use by the rolls at Benson Mines or at Edison, N. J., although no such defense is set up in the answer, but might be later through amendment.

The foregoing letter, I think, will acquaint you with the principal features of the suit so far as it is at present developed. When you have considered the testimony, will you kindly return the testimony and the drawing to me, as Mr. Bentley and probably Mr. Mason will need it in the further progress of the case, although there is no present need for the same.

Very truly yours,

*Lawrence H. Hinkle*

*Sealed*

*per my copy*

*Remaind case*

Jan. 10, 191

Louis Hicks, Esq.,  
71 Nassau St.,  
New York City.

My dear Mr. Hicks:

I have looked over the testimony in the suit against the Allis-Chalmers Company on the Giant Rolls patent and think that everything is most effectively covered. It strikes me that the case is a peculiarly aggravating one and I think it ought to commend itself to the Court.

There is only one suggestion that I can make, which possibly you have already in mind. When I first considered the Giant Roll patent I never could understand why it was that the passage of the enormous amount of rock between the rolls did not seriously strain the bearings therefor, but upon mentioning my doubts to Mr. Edison he told me that the tremendous inertia of the rolls prevented them from separating under the momentary stresses which were imposed upon the rolls by the rocks passing between them. In other words, the rolls are so massive that they could not possibly separate in the fraction of a second that is occupied in the passage of the rock between them. Mr. Edison has said to me that if the bearings were dispensed with entirely the rolls would not separate but would retain their position



Louis Hicks.

(2)

1/10/10.

in space. Of course, if the rolls were turning at a much slower speed and were simply exerting a crushing effect on the masses of rock, not only would the power have to be enormously multiplied, but you will see that the bearings themselves would have to be tremendously large and great difficulty would be encountered in properly lubricating them. By using enormous masses of iron in the rolls and operating them at high speed, so as to break the rock by kinetic energy, we are able to use a very small driving power and the bearings for the rolls are not unduly large and the lubrication of the bearings is very easily effected. I have never mentioned the matter to Mr. Edison, but I also strongly suspect that in the operation of these rolls there is a certain gyroscopic action and by reason of that phenomenon the rolls tend to hold themselves in their position regardless of the bearings in which they are mounted. In other words, by reason of the gyroscopic effect an additional steadying power is taken advantage of in the crushing of the rocks.

I am dictating these notes very hurriedly on the phonograph, but I think you will get an idea of what I am driving at, and they may come in handy when you are taking your rebuttal testimony as additional grounds for sustaining the patent.

Yours very truly,

FLD/IWV

Wm. H. Goussard.

LOUIS HICKS,  
COUNSELLOR AT LAW AND PROCTOR OF ADMIRALTY,  
CORPORATION, PATENT AND GENERAL LAW,  
71 NASSAU STREET, CORNER JOHN STREET.

TELEPHONE NUMBER IN CORTLANDT.

Mar. 26, 1910.  
NEW YORK, N. Y.

Frank L. Dyer, Esq.,  
Pres. National Phonograph Co.,  
Orange, N. J.

My dear Mr. Dyer:-

I enclose a copy of a letter which I have sent by same mail to Mr. Mason in regard to the suit against the Allis-Chalmers Co. et al on the Edison giant rolls patents. The points of the letter are two; first, that I have obtained an order limiting defendants' time to take testimony to May 1, 1910 and our time for rebuttal proofs to July 1, 1910; and second, that I believe that defendants will be forced to endeavor to establish a defence of more than two years prior public use or anticipation by a use in this country of the rolls by some third person prior to Mr. Edison's earliest date of invention. I do not believe that there will be any ground for establishing such defences, but from letters which I have received from defendants' counsel saying that he is engaged in certain investigations with regard to evidence looking in the direction indicated, I believe the attempt will be made. Therefore, I am taking every precaution to gather such evidence as may be available to meet such defences if raised. I have asked Mr. Mason to take the matter up with Mr. Edison and possibly you may at the same time think it advisable to do the same, or you may, yourself, have information or be in a position to refer me to some person who has information which will assist me.

With my best regards, I am,

Yours very truly,

*Louis Hicks*

[ENCLOSURE]

LOUIS HICKS, (M)  
COUNSELLOR AT LAW AND PROCTOR OF ADMIRALTY,  
CORPORATION, PATENT AND GENERAL LAW,  
71 NASSAU STREET, CORNER JOHN STREET.

TELEPHONE NO. 10 CANTLANT.

NEW YORK, N. Y., Mar. 26, 1910.

William H. Mason, Esq.,  
c/o Edison Crushing Rolls Co.,  
Stewartsville, N. J.

My dear Mr. Mason:-

Edison vs. Allis-Chalmers Co., et al.

I have obtained an order limiting defendants' time to take proofs to May 1, and limiting our time to take testimony in rebuttal to July 1. This arrangement would close the proofs before the summer and enable us to bring the case on for final hearing in the fall. So far Mr. Wilkinson has made no move toward putting in his proofs and, therefore, I have secured the order limiting his time.

I have been going over the case within the last few days and there are one or two matters of which I wish to write to you.

As appears from my letter of December 11 to Mr. Mallory, and Mr. Williams' letter of December 18 to me, I wrote to the Dunbar Stone Company of Detroit warning them against infringement of the Edison giant rolls patents and Mr. Williams stated that a copy of my letter to Mr. Mallory suggesting that the Sibley Quarry Company obtain, if possible, further information, was forwarded to the Sibley Company. Has any further information been obtained with regard to the construction of infringing rolls by the Dunbar Stone Company?

Referring to my letter of January 4, 1910 to Mr. Williams, to your letter of January 17 to me enclosing a copy of Mr. Herter's report of March 15, 1907, and to your letter of March 4 to me, all relating to the rolls designed by Mr. Phelps and built for the Clinton Point Stone Company of Clinton Point, N. Y., and later removed to Benson Mines where they now are in their changed condition, I understand you to say that your information in regard to these rolls is as follows:-

(1) The rolls were designed and built in 1896. If this is so, we have nothing to fear in regard to a defence based upon a public use of those rolls more than two years prior to the time, July 16, 1897, when Mr. Edison filed his application for the giant rolls patents. However, if it should appear, although I do not understand that it was the fact, that the Benson Mines rolls, when originally put up at Clinton Point, operated by kinetic energy and were otherwise similar to the Edison giant rolls, in such case it would be necessary for Mr. Edison to prove that his date of invention was not only prior to his filing date, July 16, 1897, but also prior to the designing and construction of the Benson Mines rolls in 1896. Of course, Mr. Phelps was formerly with Mr. Edison and I have no doubt that in 1896 what he did was the result of what he learned from Mr. Edison previously to that date.

(2) In your letter to me of March 4, 1910, you say that Mr. Herter has found the drawings for the original friction put on the giant rolls at Edison, N. J. and that he has also found the drawings for a friction exactly alike in design which was put on the intermediate rolls which were 4 ft. x 4 ft. and set directly under the giants. The drawings for the friction of the giant rolls you say were made April 14, 1894 and the drawings of the friction

[ENCLOSURE]

W.H.M. -2-

Mar. 26/10.

for the intermediate rolls were made April 16, 1894. You add that it would seem from the fact that Mr. Edison had the friction designed at exactly the same time for the giant rolls and for the intermediate rolls, that the idea of these frictions was purely to save the belt. From this I understand that you think that when the drawings were made in April, 1894, the idea of breaking rock by kinetic energy, consisting in first running massive rolls having irregular surfaces up to high speed, then delivering rock to the rolls, thereby breaking the rock by kinetic energy, and slowing down the speed of the rolls, then running the rolls up to speed again and feeding more rock to the rolls so that the rock is fed at intervals to the rolls in the manner stated, had not then been fully developed, if, indeed, it had at that time occurred to Mr. Edison. It may be that later on in the case we shall have to inform ourselves accurately in regard to all these points.

My impression is, subject to correction, that Mr. Edison probably evolved the idea of the giant rolls for breaking rock by kinetic energy in the manner stated at an early date, but that much experimental work was necessary before the invention could be tested and put into practical operation. Now, the legal aspect of the situation is, with regard to a possible defence that the Edison rolls were in public use at Edison, N. J. or elsewhere more than two years before Mr. Edison filed his patent application on July 16, 1897, that whatever Mr. Edison did in an experimental way to test and to develop his invention is not to be regarded as a public use, the two years beginning and running only after the real experiments had ceased with the completion of the invention. In other words, in order to establish a defence of more than two years prior public use, the defendants would have to show that Mr. Edison had completed his invention and had made all necessary experiments therewith more than two years before July 16, 1897, and that thereafter and still more than two years before July 16, 1897, Mr. Edison had publicly used the invention, that is to say, had used the invention in the presence of and with the knowledge of some other person.

(3) I understand from your letter of March 4, 1910, that Mr. Phelps told Mr. Herter that he, Mr. Phelps, put a friction pulley on each roll and also a friction pulley on the line shaft driving the rolls. You do not give the date when the friction pulleys were put on by Mr. Phelps, but I assume that it was in 1896 when the rolls were designed and built. You say further that Mr. Herter gathered from Mr. Phelps that his frictions were put on the rolls simply because he was keeping the general scheme of the original giant rolls at Edison. From this information it would appear that your idea is that the rolls designed and built by Mr. Phelps in 1896 were not designed or built to break rock by kinetic energy according to Mr. Edison's method. Of course, if in 1896 Mr. Phelps did nothing more than to use the friction pulleys or "frictions", as you call them, shown in the drawings of April, 1894, and designed by Mr. Edison prior to April, 1894, in that case the drawings of 1894 being in existence, as you say, the proof of Mr. Edison's priority over Mr. Phelps would be clear.

(4) Will you kindly have made and sent to me a copy of the drawings of April, 1894, showing the frictions designed for the giant and intermediate rolls?

[ENCLOSURE]

W.H.W. -3-

Mar. 26/10.

I do not think that the defendants can succeed upon the United States and English patents set up in the answer as anticipations of the Edison giant rolls. Therefore, although it is well known that it is a most difficult matter to establish in a patent suit a defence that the invention was in public use more than two years before the application for the patent was filed, or a defence that some third person knew and used the invention before the patentee invented it, still it seems to me that the defendants' counsel will make a strenuous effort to build up such defences for want of any other defences upon which they can rely. Therefore, I attach great importance to our efforts at the present time to gather such evidence as will enable us to meet and overthrow such defences if raised by the proofs to be introduced by defendants. Hence I send two copies of this letter to you and I am also sending one copy of it to Mr. Dyer, in the hope that you will not only gather such information as you can independently of Mr. Nelson, but also that you will, when you have a proper opportunity, give to Mr. Nelson one copy of this letter and obtain from him such information as he undoubtedly can give us.

Mr. Mallory may very likely have some knowledge of these matters, and for this reason and because he is most interested in the suit and desirous to assist and be kept informed of its progress, I would request that you kindly call Mr. Mallory's attention to this letter.

With my best regards to you all, I am,

Yours very truly,

*Louis Hick*

P.S.

Mr. Wilkinson, defendants' counsel, on February 5, wrote to me saying that his client "has been investigating some matters of defence, and have ascertained that in a very few days it will be definitely known whether the matters which we are investigating will form part of our proofs", and on February 21 Mr. Wilkinson said, "I am now having a representative in the East investigate certain matters and to ascertain what witnesses we can rely upon to establish the proposed matters of defence. I expect that the representative referred to will return to Chicago in a few days, and I will then at once fix a date for proceeding with defendants' testimony." On cross-examination of our witnesses you will remember that Mr. Wilkinson referred to Mr. Phelps and the rolls at Benson Mines, implying that a draftsman, formerly employed by Mr. Edison, claimed to have invented the rolls.

Can you find out the date when the rolls were removed from Clinton Point to Benson Mines?

*Copy file*  
*Allis-Chalmers -*  
*suit*

March 27, 1910.

Louis Hicks, Esq.,  
71 Nassau St.,  
New York City.

Dear Mr. Hicks:

Yours of the 26th inst. has been received in reference to the suit against the Allis-Chalmers Co. Personally I am not familiar with the dates of Mr. Edison's work on the giant rolls because the original application was filed before I came to New York. There can be no doubt, however, but that Mr. Edison's work, at least up to the end of the year 1897, was purely experimental. I visited the plant at Edison in the Spring of 1898 and at that time it was believed that the experimental period had passed, and Mr. Edison commenced negotiations with capitalists in London to exploit his inventions on ore-milling machinery for the rest of the world. I have always understood, as a matter of general gossip, that a former draughtsman of Mr. Edison's left him in the early days and started to build a set of giant rolls somewhere else, claiming that he was the inventor, but I understood from Mr. Edison that those rolls were an absolute failure.

If I can be of any service to you in connection with this particular defense, do not hesitate to call upon me.

At all times I shall of course be most interested to hear of the progress of the case. Yours v y

*Holden* *De m* *De m* July 13, 1910

Mr. Dyer:

I had a talk with Harry L. Duncan on Monday, in regard to the suit on the long kiln patent. He said that in the original test case the defendant had acknowledged the validity of the patent, and had taken out a license, but that there is one other suit pending in which nothing has been done beyond the filing of the replication, for the reason that Mr. Duncan thinks that it would be very much more advisable and safe to go before the court on the two patents, that is, the apparatus and process both, than to try out the case on the apparatus patent alone.

He said that he talked this matter over with you about a year ago and thought that you agreed with him, and he thinks that we should take our appeal to the Board of Examiners in Chief in the process application right away, and ~~claiming~~ that we should be successful in getting some good claims, and that we should then take out the patent and bring suit based upon both patents against some concern, so that the process claims would be before the court together with the apparatus claims.

He considers the chances before the Board very good indeed, and is willing to co-operate in every way upon the appeal. He suggested that I get up the argument, and that we should then go over it together, which seems like a good suggestion.

*De m* *Holden*

DH/MJL

*Warden*

July 20, 1910

Mr. Dyer:

I saw Mr. Duncan yesterday in regard to the suit on the Edison kiln patent, and find that he is perfectly willing to go ahead with the taking of proofs in this suit, but would like to have a letter from you asking him to take such step, on account of the misunderstanding which seems to have arisen.

His idea of a prima facie case is to put on the stand the former superintendent of the defendant, who is expert in burning cement, but is not a patent expert, and examine him as to the apparatus used by the defendant, and how it was used, and what results were obtained. He does not think it would be advisable to put a patent expert on for the prima facie case, as the cross-examination would then be directed to all sorts of matters connected with the patent and its file wrapper, which he thinks can just as well be avoided at this stage of the case. He thinks it would probably be well to have a patent expert for the rebuttal.

The best patent expert on cement is believed to be Prof. Carpenter of Cornell, and he thought it would be advisable to ~~retain~~ Prof. Carpenter if we <sup>can</sup> get him.

It seems to me that if we are to retain this expert, it should be done before we begin taking our proofs, because the other side may retain him if we wait, but Mr. Duncan says that Prof. Carpenter is at present in California, so that it might be difficult to arrange the matter at this time. What would you like to do in this regard?



The claims which Mr. Duncan thinks are infringed are 1, 2, 5, 8, 17 and 18, and possibly 6, 7 and 11.

As to claim 6, we do not see how we can prove that in the defendant's apparatus the length of the kiln beyond the combustion zone is sufficient to permit substantially all the carbon dioxide to be evolved from the cement material. The substance of this claim seems to be a process. While the defendant's kiln might be long enough to permit this, it seems to me that we should be required to prove that the carbon dioxide was evolved as set forth in the claim. This we have no way of doing.

As to claim 7, we do not know at present whether there is a damper in the stack or flue.

I would be glad to have your views in full as to the matters referred to herein.

*Deles Holden*

DH/MJL

**Legal Department Records  
Cement - Interference Proceeding**

***Shiner v. Edison (No. 27,406)***

This folder contains material pertaining to a Patent Office proceeding involving an application filed by Edison on January 27, 1906, for a patent on a rotary kiln that he had invented in 1899 and a competing application by William C. Shiner. The one selected item is Edison's brief on appeal to the commissioner of patents, who ruled in favor of Edison in June 1909.

Legal Box 172

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**IN THE UNITED STATES PATENT OFFICE.**

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WILLIAM C. SHINER

VS.

THOMAS A. EDISON.

Interference

No. 27,406.

Rotary Kiline.

ON APPEAL TO THE COMMISSIONER IN PERSON.

---

**BRIEF FOR EDISON.**

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FRANK L. DYER,

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HERBERT H. DYKE,

DYER SMITH,

*Of Counsel.*

United States Patent Office.

WILLIAM C. SHINER,  
vs.  
THOMAS A. EDISON.

Interference No. 27,406.  
Rotary Kilns. On Ap-  
peal to the Commis-  
sioner in Person.

BRIEF FOR EDISON.

This appeal is taken by Edison, the senior party, from the decision of the Board of Examiners-in-Chief in favor of the junior party, Shiner. The decision was rendered by a divided Board, Examiners-in-Chief Stewart and Campbell, holding—though they were not in agreement in their reasoning—that priority should be awarded to Shiner, and Examiners-in-Chief Macaulay holding that Edison is entitled to the award of priority. Each of the three members of the Board of Examiners-in-Chief wrote a separate opinion.

The senior party, Edison, filed his application on January 27, 1906. Shiner did not file until nine months later, his filing date being October 26th of the same year. The interference is between Edison's application and a patent granted to Shiner on February 19, 1907, upon his application of October 26th, 1906.

The Invention and Interference Issue.

The invention in issue is an improvement in cement burning kilns devised for the purpose of re-

turning to the kiln the finely divided cement forming material carried into the stack by the rapid flow of the discharged gases from the kiln. A chamber is provided at the base of the stack so as to increase the diameter of the stack in that neighborhood, thereby decreasing the speed of the discharged gases and allowing the material carried by the gases to fall upon the bottom of the chamber, where it collects in a sort of hopper provided for the purpose, and is returned by means of a suitable returning device to the kiln to be burned into cement clinker. The returning means shown by each of the applicants consists of a rotary conveyor.

The interference issue is as follows:

"1. In a rotary kiln, a stack provided with a base having a chamber adapted to receive and to retain matter dropped from the stack, a kiln-tube connected with the base and terminating with its interior portion slightly below the chamber thereof, and movable means for positively conducting the descending matter from the stack-due directly into said kiln."

**The Burden of Proof on Shiner; His Patent Indirectly Granted.**

The patent to Shiner, it will be noted, was granted while Edison's application was pending in the Patent Office. On the question of the burden of proof, the Examiner of Interferences held as follows:

"Shiner has a patent, which was issued to him on the 19th of February, 1907, but this patent having been inadvertently issued, does not change the relation of the parties, and the burden is therefore upon Shiner of proving priority by preponderance of evidence."

Examiner-in-Chief Campbell stated in his opinion (pages 9 and 10), that it was error to hold that

the patent was inadvertently granted to Shiner, basing this view upon the alleged ground that Edison did not claim the invention of the issue until after the granting of Shiner's patent, and that Edison was not claiming this invention at the time that Shiner's patent was granted. We had thought that this ghost had long ago been laid, and that the rule was well established that an applicant has the benefit of the date of filing an application disclosing his invention for any claim which may properly be made upon the disclosure thereof, and so are very much surprised at such a finding, but, as each of the Examiners-in-Chief who decided in favor of Shiner appears to have erroneously assumed that Shiner was the first, and Edison the last, to claim the invention of the issue (though Mr. Campbell was alone in holding that this supposed fact, if true, would have any effect upon the rights of either of the parties), we shall consider the applications of the two parties with a view to showing the real facts relative to the times of claiming the invention by the parties.

It will be seen that the issue of the interference comprises three elements; the stack with the chamber at its bottom; the kiln-tubes connecting with the chamber; and means for returning material collected in the chamber to the kiln. There are some minor limitations in the claim to which we shall refer hereafter, but these are its principal elements. Edison's application, as originally filed, contained three claims which were numbered respectively 3, 4 and 5, and which were drawn directly upon the combination of elements now forming the issue. For example, Edison's original claim 4, read as follows:

"4. The combination with a rotary kiln, of a settling chamber with which the upper end of the kiln connects and means for returning

to the kiln material deposited in said settling chamber, substantially as set forth."

and these claims to this combination of elements remained in the application during the entire time that Shiner's application was pending and including the time of the issue of the patent.

Shiner's application, at its filing, contained several claims to this same combination of elements, claim 5, for example, reading as follows:

"5. In a rotary kiln, a stack having a flue and a base provided with a chamber, a kiln connected with the base and terminating in the chamber thereof to permit dust or fine particles from the kiln to pass directly into the flue, and means arranged in the base of the chamber for conducting the dust or fine particles from the flue back into said kiln."

Shiner's claims were rejected on November 13, 1906. They were then cancelled and two claims were substituted, which, after further slight amendments, became the claims of the patent.

Of these, Claim 1 is the issue of this interference. So far as is apparent, the only difference between the issue and Claim 4 originally filed by Edison is that the claim of the issue sets out that the bottom of the kiln-tube is below the bottom of the chamber and that the returning means returns the material direct to the kiln. It is inconceivable that the Primary Examiner having the two applications before him, with their almost identical disclosures, so far as they relate to the features in issue, and with the claims of each directed to the same identical combination of elements, could have decided that the parties were not endeavoring to claim the same invention, and could have issued the patent to Shiner without taking steps to institute an inter-

ference between him and Edison. The only way in which we can account for the issue of the patent to Shiner, under the circumstances, is, that it was issued inadvertently, and that the Primary Examiner, when he passed Shiner's case to issue, did not have in mind the disclosure and claims of the application of Edison. It seems perfectly clear that the only differences between the claims presented in these cases are such differences as arise when applications for identical inventions are being prosecuted by different parties, by reason of the fact of universal experience that no two persons will view the same subject matter in precisely the same light. To hold that Edison did not claim the invention of the issue from the time of the filing of his application, when he did in fact have claims for the same combination of elements and for performing the same functions, is substantially to hold that no interference will be declared between pending applications, but that every applicant, in order to obtain an interference, must wait until his opponent's patent has been issued. It cannot be that the amendments to Rule 98 were made for any such purpose.

We submit, therefore, on this phase of the case, that it is entirely immaterial who was the first to claim the invention of the issue; but that, since it has been shown that each of the applicants was claiming this invention from the filing of his application, and Edison was the first to file, he was the first to claim the invention; that the patent to Shiner was inadvertently granted while Edison's application was pending and that the burden of proof is on Shiner.

#### The Evidence.

What we have had to say so far has had reference only to the disclosure of the two applications. The

evidence in this interference is in the form of a printed "stipulated statement of facts for both parties," signed by counsel on behalf of the respective parties. The stipulation, after setting out certain facts which appear from the file of Mr. Edison's application, presents the cases of the interferents, on pages 5 and 6, as follows:

*Shiner's Case.*

1. The invention defined by the Interference issue, the first claim only, of the Shiner patent No. 844,623 of February 19th, 1907, was conceived by the patentee, Shiner, on or about July 15th, 1903. He made drawings of the invention about July 20th, 1904, and explained the same to others about the 25th of July, 1904.

2. That he first embodied the invention, the issue of this Interference, in a rotary kiln, at the Atlas Portland Cement Company's Works, at Northampton, Pennsylvania, July 29th, 1904, and the Kiln was started up, with said invention therein about August 1st, 1904, and worked successfully since said date. That since first said day of August, 1904, thirty odd rotary kilns have been modified to embody in structure the invention, the issue of this Interference, by the said Shiner and others under his superintendence of installation as set out in his patent of February 19th, 1907, No. 844,623, and all of which kilns embodying the said Shiner invention are now in successful operation, at different points at this time. The cost of changing an ordinary rotary cement clinkering kiln to the Shiner patented invention to effect a reduction of waste in the clinkering of the cement materials is between six and ten dollars per kiln. That this can be accomplished by principally a brick-layer under plans of the Shiner invention. The Shiner invention is designed to conserve waste in the production of Portland Cement.

*Edison's Case.*

1. The invention defined by the Interference issue was conceived by the party Edison on or about January 1, 1899, and was at that time fully disclosed by him to others at Orange, and elsewhere within the United States, but not to his knowledge at any time to Shiner and his associates.

2. In the month of January, 1899, Edison had working drawings made of the invention and in the month of July of that year he caused a second set of working drawings thereof to be made. In the month of September, 1899, he made a wooden model of the invention and from time to time during the year 1899, and particularly in the month of February of that year, he made numerous sketches illustrating the invention of the issue.

3. Edison began in October, 1899, and completed in August, 1900, at the Edison Laboratory, West Orange, N. J., a complete, full size kiln involving therein the issue and immediately after its completion this kiln was successfully tested and the apparatus was successfully operated and large amounts of cement-forming material was burned to clinker which was ground to form Portland Cement.

This cement was not made use of commercially, however, but was merely tested to determine that the clinker was properly burned. These operations constituted a complete reduction to practice of the kiln, in which was embodied the issue. The development of the Edison kiln involved expenses of over one hundred thousand dollars, and were witnessed by large numbers of employees of the Edison Laboratory and by numerous visitors, none of whom, however, was Shiner and his associates to the best of the knowledge and belief of the said Edison, nor is there any claim at this time that Shiner derived the ideas of his invention patented February 19th, 1907, from

what the said Edison might have been doing. Both working independently, as inventors, in this field.

The following table shows the salient facts and dates:

	Shiner.	Edison.
Conception .....	July 15, 1903	Jan. 1, 1899
Drawings .....	July 29, 1904	Jan., 1899
		July, 1899
Disclosure .....	July 25, 1904	Jan. 1, 1899
Reduction to practice .....	July 29, 1904	Oct., 1899 to Aug., 1900

Kilns since modified to embody the invention .....30 odd. No evidence. Application filed.....Oct. 26, 1906 Jan. 27, 1906 Patent granted.....Feb. 19, 1907

It appears from this table that Edison was the first to conceive, the first to reduce to practice and the first to file his application. It appears also that, while Edison waited five years and five months after reducing the invention to practice, before filing his application for patent, there was a similar delay on Shiner's part of two years and three months, and that Shiner, since reducing the invention to practice, has embodied it in thirty odd kilns, though no dates appear for the making of these kilns. As we have seen, the case is not affected by the inadvertent granting of the patent to Shiner.

**Edison Entitled to the Award Because the Prior Inventor. Alleged Exceptions to the General Rule that priority will be awarded to the first inventor.**

No argument is needed to show that if the award of priority is to go to the prior inventor in accord-

ance with R. S. Sec. 4904, Edison must succeed in this interference, for he is both the first to conceive the invention and the first to reduce it to practice, and is therefore necessarily the prior inventor.

It has been held in recent years that in cases where the prior inventor is shown to have deliberately suppressed his invention, and has been moved into activity by the knowledge that a rival inventor has entered the field, priority may be awarded in an interference in favor of the later inventor, if he was diligent and was the first to disclose the invention to the public. We are unable to understand how such decisions can be correct in so far as they authorize the grant of a patent to a later inventor in the face of a prior completion of the invention by another, for such a patent is anticipated and, if of any force whatever, is good only against the opponent in the Patent Office, and against no other person in the world. Such a document is not a patent at all in any sense of the term. And if patents are to be granted to another than the first inventor, the statute should be amended, not construed, to that end. We assume, however, that the Commissioner will consider himself bound by these decisions, and that we must be satisfied with merely voicing our protest. A leading case on this subject is *Mason vs. Hepburn*, C. D., 1898, page 519, decided by the Court of Appeals of the District of Columbia. This line of decisions is so well-known that we need not go into the various cases in detail. Their scope and the reasoning on which they are based is well expressed by the following extract from the case of *Mason vs. Hepburn*, *supra*:

"Considering, then, this paramount interest of the public in its bearing upon the question as presented here, we think it imperatively de-



mands that a subsequent inventor of a new and useful manufacture or improvement who had diligently pursued his labors to the procurement of the patent in good faith, and without any knowledge of the preceding discoveries of another, shall, as against that other, who has deliberately concealed the knowledge of his invention from the public, be regarded as the real inventor and as such entitled to his reward."

That the rule of these cases will not be extended and is applicable only where doubt exists concerning the reduction to practice by the first inventor, appears from several subsequent decisions of the same tribunal. This, we think, is the true doctrine for if there is doubt as to the reduction to practice by the party earlier in the field, it may be argued from subsequent delay that his prior work was no more than an abandoned experiment. But where no such doubt exists, we cannot see how any tribunal which has to pass on questions of priority can avoid awarding priority of invention to the prior inventor. For example, in the case of *McBerty vs. Cook*, C. D., 1900, page 248, the same court said:

"The facts are not sufficient to bring the case within the rule announced in *Mason vs. Hepburn*, C. D., 1898, 519, and that rule will not be extended to any case not coming clearly within it. The case falls rather within the governing principle of the later case of *Betty vs. Newton*, C. D., 1899, 284. As was said in that case, delay is often a potent circumstance in aid of a determination in a case not otherwise clear of the question whether an invention had been successfully reduced to practice or had resulted in nothing more than an abandoned experiment. That case does not occur in the case at bar, because, as stated in the beginning, the evidence of actual and successful reduction to practice is ample."

See also *Brown vs. Blood*, 105 O. G., 976.

There is no doubt in this case about Edison's reduction to practice in 1900, for it is stipulated (Edison's case, *supra*) that "Edison . . . completed in August, 1900, a complete, full size kiln involving the issue, and immediately after its conclusion this kiln was successfully tested" and "these operations constituted a complete reduction to practice of the kiln, in which was embodied the issue." If we apply the rule of *McBerty vs. Cook*, *supra*, that where the proof of reduction to practice by the earlier inventor is unmistakable the award of priority must necessarily go to the first inventor, the undoubted proof of Edison's successful reduction to practice in 1900 absolutely disposes of the interference in favor of Edison.

#### Edison Disclosed the Invention to the Public in 1900.

The Examiners-in-Chief devoted considerable discussion to whether the doctrine of this line of cases is dependent upon an equitable estoppel operating against an earlier, negligent inventor and in favor of his more diligent, though later rival, or whether it is dependent upon forfeiture to the public. But, inasmuch as they were agreed that a disclosure to the public by the earlier inventor prior to such disclosure by the later inventor would relieve the former from either estoppel or forfeiture, as the case may be, and this view appears to be fully borne out by the decided cases, we may confine our inquiry to determining whether or not such disclosure was made.

The stipulation which is the evidence in the case, after describing the completion and testing of Edison's kiln, resulting in the reduction to practice of the invention of the issue, continues:

"The development of the Edison kiln involved expenses of over one hundred thousand dollars, and were witnessed by large numbers of employees of the Edison Laboratory and by numerous visitors, none of whom, however, was Shiner and his associates."

The majority of the Examiners-in-Chief held that this language does not establish the fact that the numerous visitors witnessed the successful testing of the invention in issue. In this we believe that they are in error. In the stipulated state of facts, the completion and testing of the kiln are first set out and then the resulting reduction to practice. This is followed by the statement that its "development" was witnessed by numerous visitors. To our mind it is clear from the arrangement and obvious relation of these several statements, that, by the development of the kiln in this connection, is meant the construction and successful testing which had already been referred to in the stipulation. With respect to inventions, development is a well understood term. All inventors proceed by steps. A device is first made and tested to find if it is satisfactory, and if any defect develops, it is remedied by the making of changes or a new device, and this in turn is again tested to ascertain whether the defects have been eliminated, and the development of an invention is never complete until it has been finally tested and found to operate successfully. Its development ends then and not until then. We do not say, of course, that this particular kiln was developed in this precise way, but make this explanation merely to show what is the common understanding as to the development of an invention. We think that, from the context and the way in which the various statements in the stipulated testimony are arranged, and from the well understood meaning of the word "development" as applied to inventions, it is clear that the successful

operation of the device was carried on in public. Examiner-in-Chief Macauley's observation on this subject is as follows: (Decision of Examiners-in-Chief, page 21):

"It seems fair to assume that the development here referred to refers to the preceding statement of the completion of the invention, including the successful operation thereof, and in this view of the stipulated state of facts the invention was at that time placed in the hands of the public."

Whether or not the language of the stipulated evidence includes the witnessing of the successful operation of the invention by visitors at the Edison Laboratory, it is clear that the kiln was open to the inspection of the public and that it was successfully tested where the public had access to it. These facts are very close to the facts in the case of *Zimmer v. Horton*, recently decided by your Honor, and reported in 137 O. G., 2219, and affirmed by the Court of Appeals for the District of Columbia in 137 O. G., 2223. In that case, the rule of *Hess v. Hepburn* being invoked against Zimmer, the Court of Appeals held that the fact that the device was tested in a room to which the public had access, was a sufficient disclosure to the public to negative any intention of suppressing the invention. The Court made use of the following language:

"As his (Zimmer's) date of reduction to practice is earlier than the earliest date claimed by Horton, he is entitled to priority unless it affirmatively appears that he abandoned the invention or secreted it and brought it to light after Horton had given it to the public. Neither of these conditions is shown to have existed. Exhibit C was for a period of several weeks tested in a room to which the public had access. Exhibits D, E and F which, it must be held, embody Zimmer's in-

vention, were also operated in such a manner as to relieve Zimmer and his assignee of the charge of suppressing the invention."

The majority of the Examiners-in-Chief, having decided that the evidence did not show that the visitors to the Edison Laboratory witnessed a successful operation of the device embodying the invention, held that for that reason Edison did not disclose the invention to the public in 1906. For reasons already given, we submit that the evidence does show that the visitors, in witnessing the development of the kiln, witnessed its successful operation, but, if it be assumed that witnessing the development of the kiln did not extend to the witnessing of its successful operation, and that the visitors only saw the construction of the device and the relation of its parts, we submit that this alone was a sufficient disclosure of the invention to the public, particularly in the light of the fact that the evidence shows that this identical device was successfully tested and found to be a successful reduction to practice of the invention in issue.

The successful testing of a device of this nature is at best a matter of deduction. Substantially all that an eye witness of such a successful operation of the device would be able to see, would be that the shaft of the conveyor is rotated when the device is put into operation, and all the elements of the issue being hidden within the interior of the kiln, they would not be open to inspection nor to visual determination of whether they were performing their functions or not, and even if it be assumed that a window could be provided for observation from without, the dense cloud of smoke and dust at an enormously high temperature in which these elements would be enveloped would prevent observation by such means. It is only from calculation based upon the amount of material fed to the kiln

and the amount of cement clinker produced thereby, and by comparison upon such data with kilns not equipped with such a device, that any information can be gained as to whether a saving is effected by the use of the improvement of the issue, and it must be perfectly apparent that a member of the public who witnessed the construction of the device and knew just how it was gotten up, would know a great deal more about the invention than one who was merely an onlooker at a time when it was in successful operation.

In the decisions of *Mason vs. Hepburn* class, the acts, which have been held to deprive a prior inventor of the award of priority by reason of what has been accomplished by a later inventor, are acts apparently growing out of and indicating an intent to suppress the invention, and to keep knowledge of it from the public, and furthermore the decisions hold that no such intent will be presumed even where there has been delay, but it must be proved by the party advancing it. This is perfectly clear from all the cases. For example, in the case of *Zimmer vs. Horton*, just cited, the Court of Appeals says that the earlier inventor is entitled to the award "unless it affirmatively appears that he abandoned the invention or secreted it and brought it to light after Horton (the later inventor) had given it to the public."

We have made diligent search through the recorded decisions and are unable anywhere to find authority for the holding of the Examiners-in-Chief that a disclosure to the public, to be sufficient to negative an intent to conceal or suppress the invention under the rule of *Mason vs. Hepburn*, must necessarily consist in a viewing of a successful test of a device embodying the invention by members of the public. It cannot be doubted that any such requirement is much too strict, for the particular

kind of evidence of intent to suppress or not to suppress the invention is decidedly of minor importance. In any reasonable view of the matter any evidence which will show what was the intent of the inventor will answer the purpose, so long as that intent appears with reasonable clearness from such evidence.

In *Walker on Patents*, Fourth Edition (page 125) Mr. Walker states, citing *Bustman vs. Houston*, 95 O. G., 2066, a D. C. App. Case, that a disclosure of an invention consists in making it known to another person well enough to preserve its plan for the benefit of others if the inventor were to die without doing anything further. In whatever way the language of the stipulated statement of facts is construed the disclosure referred to therein certainly meets the requirements of this definition.

Edison has therefore affirmatively proved that he had no intent to suppress or conceal the invention. But he is not required to furnish such proof, for the cases hold that instead of the earlier inventor being required to prove fully and formally that he did not abandon or forfeit his rights to the invention, the shoe is on the other foot, and he who asserts abandonment or forfeiture or suppression or concealment of the invention must furnish affirmative proof; *Henson vs. Voss*, 131 O. G., 942, and that abandonment is not to be presumed from mere lapse of time; *Rose vs. Clifford, etc.*, 135 O. G., 1361; "Under the statute the burden of proving abandonment is on him who asserts it; *Kellogg Co. vs. International Co.*, 158 Fed. Rep., 104; "Nor, indeed, should evidence of abandonment rest upon doubtful or controverted inference;" *Victor Talking Machine Company vs. American Graphophone Co.*, 140 Fed. Rep., 866; "Clear evidence of an intention to dedicate an improvement to the public is indispensable to establish an abandonment;" *Ido*

*vs. Trorlicht*, 115 Fed. Rep., 144; 53 C. C. A., 348; "Abandonment rests upon the intention of the inventor, and should be established by convincing evidence;" *West Pox Co. vs. Dempster Mill Co.*, 82 Fed. Rep., 331; 27 C. C. A., 191.

In view of the clear weight of authority, in substantially requiring proof beyond a reasonable doubt that Edison did not abandon or forfeit his completed invention in 1900, the Examiners-in-Chief are entirely in the wrong. And if it be admitted, as the authorities clearly say it must be, that Shiner, who asserts such abandonment or forfeiture by Edison, must fail in his contention or establish it by convincing evidence, the only possible result of this interference will be an award to Edison, for Shiner relies entirely on Edison's delay—from which abandonment or forfeiture cannot be presumed, even if Edison presented no counter-veiling proofs—and Edison has negatived any such intention by (1) completely and unmistakably reducing the invention to practice; (2) admitting numerous visitors who witnessed the development of the invention; and (3) by filing his application without any knowledge of Shiner's doings.

The conclusion appears to us to be inevitable that Edison had no intention of suppressing the invention and that he did disclose the invention to the public in 1900. The effect of such disclosure is to entitle Edison to the award of priority. In the words of the Examiner-in-Chief Campbell (Decision of Examiners-in-Chief, p. 3) "If the facts recited in the stipulation establish a disclosure to the public of his (Edison's) invention in 1900 or prior to the advent of Shiner upon the scene of invention there is of course an immediate end to the dispute between the parties in Edison's favor."

#### Shiner's Work of 1903 and 1904.

The next step in the history of this invention after what was accomplished by Edison in 1900 was Shiner's work in 1903 and 1904. The evidence shows that he conceived the invention of the issue in July of 1903, but did nothing further with it until 1904, not even disclosing it to others, and in July, 1904, he disclosed it to others, had drawings made, and on July 29th of that year, embodied it in a kiln of the Atlas Portland Cement Company at Northampton, Pennsylvania, "and the Kiln was started up, with said invention therein about August 1, 1904, and worked successfully since said date" and that since August 1, 1904, thirty odd kilns have been modified to contain the said invention, all of which were in successful operation at the time of making the stipulated statement of facts which was filed in the Patent Office on November 23, 1907.

It will be seen that in Edison's case a technical public use is negated by the evidence that the cement produced in the use of the device of the interference issue was not made use of except for testing and was not put into the ordinary channels of trade. Shiner's evidence shows nothing as to this and nothing about disclosure to the public. It appears, therefore, that one of these two things must be true of Shiner's operations in connection with his first kiln: either that he put his invention into public use on August 1, 1904, by using it to produce cement which passed into the ordinary channels of trade, or if this be not the case, then there is no evidence that the public was benefited in any way by his invention, for it is certainly true that the evidence does not show any facts concerning his disclosure of the invention to the public at that date, or that he took any steps in that direc-

tion until he filed his application for patent in October of 1906, more than two years later.

In our brief before the Examiners-in-Chief, we took the view that the evidence showed a public use by Shiner because it did not negative the passing of the product of his August, 1904, kiln into the channels of trade. We here and now recede from that position, as we are convinced that while it may be likely that there was such a public use, the only evidence is negative and not positive, and positive evidence is necessary to establish such a fact.

As to the "thirty odd" kilns in which Shiner placed the invention in issue, all that the evidence discloses is that these kilns were modified to embody the invention sometime between August 1, 1904, and Nov. 23, 1907, the date on which the stipulation was filed in the Office, and that they were operating successfully at the latter date. Nothing is said about the dates on which these kilns were so modified, and from anything which appears, it may very well be that Shiner did not embody his invention in any of the thirty odd kilns until after both parties had filed their applications, or even after Shiner's patent had been issued. When the evidence of Shiner is sifted, therefore, it appears that all he is shown to have accomplished before the date of the filing of Edison's application was the embodiment of the invention in a single kiln at the Atlas Cement Works; that there is no evidence whatever that the public had any information as to the construction or mode of operation of that kiln, and that if the public did, in any way, reap any benefit from what was done at that time, it was by reason of the cement made in the kiln being put into the ordinary channels of trade. Of this, as already stated, there is no positive evidence, but if the cement was actually sold to the public, it would be of no value as a means of dis-

closing the invention, for it would have no peculiar characteristics flowing from the fact that it was made in a kiln embodying the invention in issue; it would be only ordinary Portland cement, with which the public was already perfectly familiar, the same as made in any other kiln, and the public could have no possible way of knowing that in manufacturing the particular cement a slight saving had been effected by returning to the kiln the material which would otherwise have passed out of the stack. Shiner's attorney strenuously contends that Shiner did not put his invention into public use, and if he is correct in this, it must be that the public reaped no benefit from his work, for there is nothing to show that the public, or any member thereof, had any knowledge of what was done by Shiner in 1903 and 1904.

It will be noted that of the Examiners-in-Chief who rendered the decision appealed from, two are agreed that Shiner did not disclose to the public before Edison's application was filed. Examiner-in-Chief Campbell's views on this point are to be found on page 14, and Examiner-in-Chief Macaulay's views on page 22 of the decision appealed from, the latter being as follows:

"Further, the record shows that Edison and not Shiner, was the first to take steps to place the invention before the public. It does not appear from the stipulation that Shiner made any efforts in this direction before his application for patent. A kiln embodying his invention was operated in August, 1904, and since that time the invention has been put in 'thirty odd kilns,' according to the stipulation, but the date of any of the latter is not given nor is it stated that either the first kiln or any of those subsequently modified to embrace the invention was open to the public. It appears, therefore, that Edison in filing his application was prior to Shiner in his efforts to

give the invention to the public. In this respect also his case differs from those in which the doctrine of forfeiture was successfully invoked."

In addition to the fact that Shiner did not disclose the invention to the public until after Edison's filing date, there is no evidence of diligence on his part. The cases uniformly hold that when a later inventor is to be favored at the expense of an earlier rival it must affirmatively appear, not only that the earlier was negligent, but also that the later inventor was in the exercise of all due diligence. Shiner has failed entirely to show diligence. Before Edison's filing date he has shown nothing more than a reduction to practice and he allowed two years and three months to elapse before he filed his application. Upon this showing, how can Shiner claim the reward which is granted to the later inventor only upon condition that he has been diligent?

**Edison's Application; Shiner Within Rule of Mason vs. Hephburn.**

In this state of affairs, Edison, in January, 1906, filed his application. This action was taken by him entirely on his own initiative; he knew nothing of Shiner's work, and it had nothing to do with his filing the application. We have shown that Edison claimed substantially the invention of the issue from the filing of his application, thereby asserting from that time his right as the inventor thereof. The filing of Edison's application, under these circumstances, affords proof in addition to his throwing his invention open to the public in 1900 that Edison had no intention of preventing the public from learning of his invention, for the purpose of applying for a patent is to disclose the invention to the public and, for the disclosure, the public grants

back the exclusive right to its use for seventeen years.

We confidently assert that, whereas Edison does not come within the reasons lying back of the decisions of the *Masses vs. Hepburn* class, for he evinced every desire to give the public the benefit of his invention, by throwing his original kiln open to the inspection of the public during its "development" and he thereafter filed his application for a patent on that invention, so that the patent might issue and the invention be disclosed to the public, and by these acts any presumption which might arise from his delay in applying for a patent that he did not intend to disclose his invention to the public is effectually negated; Shiner, on the other hand, in view of the facts which are in evidence in this case comes squarely within this doctrine, and if Edison had stood on his filing date as the date of his conception and constructive reduction to practice, then under the rule of these cases, he would be entitled to an award of priority in this proceeding, entirely irrespective of any work which he did before that time.

As we have seen, Shiner completed his invention in 1904, and reduced it to practice by putting it into a kiln which was started up on August 1, 1904, and operated successfully since that time. (It is to be noted that the stipulation says "since that time" and not "ever since that time" or "continuously since that time," and that operation for a single day or even for a single hour would come within the terms of the stipulated evidence.) This is all that we need to consider, for as we have pointed out already, the thirty odd kilns referred to by Shiner are not shown to antedate Edison's filing date. As to Shiner's first kiln, there is no evidence to show that the invention of the issue embodied

therein was disclosed to the public. Shiner, therefore, stands in the position of having reduced the invention to practice, and without any disclosure to the public, having waited over two years before filing his application, while Edison—and we are speaking now only of his filing date—completed the invention by filing his application and thereby constructively reducing it to practice in the time during which Shiner was inactive and without knowing anything of Shiner's activities, and almost a year before Shiner filed his application. It follows, therefore, that if Edison were to rely on his filing date, entirely disregarding his earlier work—and this earlier work can only strengthen and cannot weaken the case made by the filing of the application,—on the facts which are of evidence and under the rule of *Masses vs. Hepburn*, Edison is entitled to have priority awarded to him.

**Shiner, Being Himself Negligent, Not in Position to Urge Edison's Delay.**

It is appellant's contention, and has been throughout the history of this case, that Shiner is in no position to set up estoppel against Edison based on the delay of the latter, because he himself has not been diligent and has delayed asserting his rights. Examiner-in-Chief Campbell held (opinion pages 16 and 17) that

"The matter of the right to the patent is not determinable upon the equities of the case, nor is there any estoppel of Shiner against the estoppel of Edison. But the right decision of the case turns solely upon the inquiry whether an estoppel arose against Edison."

Examiner-in-Chief Macauley says on the same topic (opinion page 23):

"It is also to be observed that Shiner is also open to the charge of negligence, since he de-

layed a period of more than two years after his reduction to practice before taking any steps to place his invention before the public. In view of the latter's remissness in the same respect, he is not in a position to urge equitable estoppel against Edison by reason of the delay of the latter."

In *Kellogg Company vs. International Company*, 158 Fed., 104, where conditions quite similar to those in the present case were presented the court held that the later applicant was not in a position to assert equitable estoppel against the earlier applicant, because he himself was negligent. As Edison was clearly and unmistakably the first to complete the invention and reduce it to practice, and Shiner, by reason of his own negligence, cannot set up an equitable estoppel against Edison, it follows that the latter must prevail by reason of his earlier completion of the invention.

But the matter of comparing the delays of the respective parties goes much further than this. Any rule which is applied to one of the parties must also in fairness be applied to the other. The case does not turn solely on whether there is an estoppel against Edison. If there is also an estoppel against Shiner, who shall say that it shall not be enforced? The rule, which when applied by the Examiners-in-Chief would rob Edison of the benefit of his work in 1900 if he had not disclosed the invention to the public at that time, when applied to Shiner, will deprive him of the benefit of his 1904 date, and leave the parties entirely to their respective filing dates, which at once disposes of the case in Edison's favor. The majority of the Examiners-in-Chief say that when Shiner reduced to practice in 1904 it was incumbent upon Edison to excuse his apparent delay, and they are agreed that in order

to excuse that delay, he must show that he disclosed the invention to the public in 1900 and because they held, as we submit, erroneously, that the proofs did not show such public disclosure, they awarded priority to Shiner. By parity of reasoning, when Edison filed his application and constructively reduced the invention to practice in January, 1906, it was incumbent upon Shiner to excuse his delay since July, 1904, and in accordance with the rule applied to Edison, to excuse that delay he must show that he had disclosed the invention to the public in 1904. We have seen, however, that there is no proof of any such public disclosure by Shiner, and that two out of three of the Examiners-in-Chief are agreed that there was no public disclosure of the Shiner invention prior to the filing of Edison's application. For this reason, if Edison is held not to have disclosed the invention to the public in 1900, and he is to lose the advantage of that date because of such holding coupled with Shiner's reduction to practice in 1904, Shiner must lose the advantage of the date of 1904 because of his failure to disclose the invention to the public at that time and his subsequent delay followed by the filing of Edison's application. From this it will be seen that if neither party be held to have disclosed the invention to the public at his respective date of reduction to practice, Edison must prevail by reason of his earlier filing date, and if it be found—and the facts clearly warrant such finding—that Edison disclosed in 1900 and Shiner did not disclose in 1904, then Edison must prevail, both on his work in 1900, and on his filing date.

#### Conclusion.

Edison completed the invention in 1900 and at that time disclosed it to the public, and in January, 1906, he independently, without the knowledge



that any other person had entered the field, filed his application for patent. Shiner completed the invention in 1904, but took no step to disclose it to the public until he filed his application in October, 1906. The burden of proof is on Shiner, the later applicant. While he has a patent, it was inadvertently granted and does not affect his standing in this interference.

The general rule, which is always applicable where there is no doubt of the successful reduction to practice by the first inventor, and there is no such doubt about Edison's 1900 work, is that priority shall be awarded to the first inventor and under that rule Edison is entitled to the award. Whatever exceptions there are to this general rule require affirmative proof of an intent by the prior inventor to suppress or conceal the invention; that a later inventor to secure the award of priority must be diligent and must be the first to disclose the invention to the public, and that the prior inventor's subsequent activity shall be the result of his knowledge of the advent of a rival into the field; all these things must appear or the general rule stated above will apply. That the development of Edison's invention was witnessed by numerous visitors, that he subsequently filed his application independently of Shiner; that Shiner was the last to disclose the invention to the public, and that Shiner was not diligent, but was himself negligent, negative not only one, but all of the things necessary to bring Edison within such exceptions.

While Edison permitted a comparatively long interval to elapse before filing his application, Shiner himself was likewise negligent, and is not in a position to urge estoppel against Edison by reason of such delay.

The Examiners-in-Chief held that if Edison disclosed the invention to the public in 1900, he there-

by excused his delay from that date until Shiner's activity in 1904. We have shown that he did so disclose the invention to the public in 1900, and for that reason he is entitled to succeed in this interference. Applying the same rule to Shiner, he was bound to excuse his delay from 1904 until Edison's filing date by showing a disclosure to the public prior to the date last named. He has not proven any such disclosure, and for this reason, Edison is entitled to succeed upon his filing date alone.

For these reasons, we respectfully ask that the decision of the Examiners-in-Chief awarding priority to Shiner be reversed, and that priority be awarded to Edison.

Respectfully submitted,

FRANK L. DYER,  
*Attorney for Edison.*

HERBERT H. DYKE,  
DYER SMITH,  
*Of Counsel.*

**Legal Department Records  
Cement - Case File**

***Thomas A. Edison and the North American Portland Cement  
Company v. Alsen's American Portland Cement Works***

This folder contains material pertaining to the infringement suit brought by Edison and the North American Portland Cement Co. against Alsen's American Cement Works in the U.S. District Court for the Southern District of New York. The case was initiated in March 1908 and involved Edison's U.S. Patent 802,631 on long kilns. The court decided against Edison and declared his patent invalid on May 7, 1913. The following items from the complainant's record and brief have been selected:

***Complainants' Record on Final Hearing***

- Index
- Bill of Complaint
- Testimony of Walter S. Mallory and Emil Herter
- Complainants' Paper Exhibits 44, 46-53 (Edison drawings)

***Complainants' Brief on Final Hearing***

- Summary and Index of Complainants' Argument

Box 102 ✓

Legal Box 29

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**District Court of the United States**

SOUTHERN DISTRICT OF NEW YORK.

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THOMAS A. EDISON and NORTH  
AMERICAN PORTLAND CEMENT  
COMPANY,

Complainants,

vs.

ALSEN'S AMERICAN PORTLAND CE-  
MENT WORKS,

Defendant.

In Equity  
No. 2-152.  
On Edison  
Patent  
No. 802,631.

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**Complainants' Record on Final Hearing**

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APPEAL PRINTING COMPANY, New York.

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CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

THOMAS A. EDISON and NORTH-  
AMERICAN PORTLAND CEMENT  
COMPANY,

Complainants,

against

ALSEN'S AMERICAN PORTLAND  
CEMENT WORKS,  
Defendant.

In Equity.

2

**Bill of Complaint.**

TO THE HONORABLE THE JUDGES OF  
THE CIRCUIT COURT OF THE UNITED  
STATES IN AND FOR THE SECOND  
CIRCUIT AND SOUTHERN DISTRICT  
OF NEW YORK.

THOMAS A. EDISON, a resident of Llewellyn  
Park, Orange, County of Essex and State of New  
Jersey, and a citizen of New Jersey and of the  
United States, and the NORTH AMERICAN  
PORTLAND CEMENT COMPANY, a corpora-  
tion duly organized and existing under the laws  
of the State of New Jersey and having its prin-  
cipal office and being located in the City of New  
York, County and State of New York, and being  
a citizen of New Jersey and of the United States,  
bring this their bill of complaint against the  
ALSEN'S AMERICAN PORTLAND CEMENT

3

## Bill of Complaint.

4 WORKS, a corporation organized and existing under the laws of the State of New York and of the United States and having a regular and established place of business in the Town of Alsen, County of Greene and State of New York, and within the Southern District of New York, and having there committed acts of infringement as hereinafter stated.

And thereupon your orators complain and say that said THOMAS A. EDISON was the original, first and sole inventor of certain new and useful apparatus for burning Portland cement clinker which was not known or used by others in this country before his invention or discovery thereof and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his application for United States patent therefor and not in public use or on sale in the United States for more than two years prior to his said application and not previously patented in any country foreign to the United States on an application filed by him or his legal representatives or assigns more than seven months prior to his said application and that said invention had not been abandoned.

6 And your orators further show unto your Honors that said Thomas A. Edison being as aforesaid the original, first, sole and true inventor of said apparatus for burning Portland cement clinker did upon his due and formal application therefor, filed December 6, 1902, in the United States Patent Office, obtain United States patent 892,031 bearing date October 24, 1905 on and for said invention in due form of law under the seal of the Patent Office of the United States, signed by the Secretary of the Interior and by the Commissioner of Patents, and duly recorded.

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whereby there were granted to said Thomas A. Edison, his heirs and assigns, for the term of seventeen years from and after the date of said patent, the full and exclusive right and liberty of making, using and selling said invention as set forth in said patent throughout the United States of America and the territories thereof, to the full end of the term of said letters patent as by reference to said patent or a duly certified copy thereof ready here in court to be produced will more fully appear.

Your orators further show unto your Honors that a certain license agreement was duly made and executed on or about August 31, 1899, by and between said Thomas A. Edison and the Edison Portland Cement Company, a corporation duly organized and existing under the laws of the State of New Jersey, whereby certain exclusive license privileges were granted to and in favor of said Edison Portland Cement Company as by reference to said license agreement or a duly certified copy thereof ready here in court to be produced, will more fully appear; and that subsequently a license agreement was duly made and executed on or about January 8, 1905 by and between said Thomas A. Edison, said Edison Portland Cement Company, and said North American Portland Cement Company by which said North American Portland Cement Company was granted the exclusive right to make, use and sell and to license others to make, use and sell inventions in apparatus for burning Portland cement clinker and certain claims and rights to damages and profits for the unauthorized use of said inventions and the right to prosecute suits for the enforcement and recovery thereof, as by reference to said license agreement or a duly certified copy thereof, ready here in Court to be

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10 produced, will more fully appear, whereby your orators are the sole and exclusive owners of said patent 892,631 and of the invention thereby patented, together with all claims, demands, rights and causes of action, at law or in equity, for any and all past and present infringements with full right, power and authority to demand, sue for, recover, receive and receipt for the same for your orators' own exclusive use and benefit to the full end of the term for which said patent was granted.

Your orators further show that your orators and said Edison Portland Cement Company have 11 been to great trouble and expense in relation to said invention in order to introduce, manufacture, sell and practice the same, and render the same profitable to themselves and to the public and that said invention has been and is of great benefit and advantage to the Portland cement industry and to the public generally, that said invention has gone into extensive public use and has generally superseded all prior apparatus for producing Portland cement clinker and that a large number of persons and corporations have recognized the exclusive rights of your orators to said inventions and are using and have made, 12 used and sold the same under license from your orators; and that your orators have been and are able to supply the entire demand for such apparatus for burning Portland cement clinker.

And your orators further show on information and belief that they and their licensees and representatives in interest have given due and sufficient notice to the public that said apparatus for burning Portland cement clinker was patented by affixing thereto the word "Patented" together with the date of said patent or otherwise giving notice of their rights in relation thereto.

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Yet, said defendant well knowing the premises 13 and the rights secured to your orators as aforesaid, but contriving, conspiring and confederating with other persons to injure your orators and to deprive them of the profits, benefits and advantages which might and otherwise would accrue to them from said invention has, since the grant of said patent and since full and explicit notice from your orators of their rights thereunder and before the commencement of this suit made, used and sold and is still continuing to make, use and sell at its said place of business within said district and elsewhere in said district and in the United States, apparatus for burning Portland cement clinker embodying the invention, principle of operation and claimed combinations of said patent and in infringement thereof, and in violation of your orators' rights therein and without the license, consent or allowance of your orators, and that said defendant although fully advised of your orators' rights in the premises and warned to desist from infringement thereof, threatens to continue to make, use and sell within said district and elsewhere, said apparatus for burning Portland cement clinker and otherwise infringe said patent, whereby your orators have suffered great and irreparable loss, damage and injury and have been deprived of great gains and profits which have been wrongfully appropriated and enjoyed by said defendant through his unlawful acts and whereby your orators are threatened with great and irreparable future loss, damage and injury.

And since your orators can have no adequate remedy or relief, except in this Court, to the end therefore that said defendant may, if it can, show why your orators should not have the relief hereby prayed, and may according to the 14 10

16 best and utmost knowledge, remembrance, information and belief of said defendant and its officers, agents and servants, fully, true, direct and perfect answer make to the premises (but not under oath, answer under oath being hereby expressly waived) and to all the matters hereinbefore stated and charged as fully and particularly as if specifically and separately interrogated as to each and every one of said matters, and may be compelled to account for and pay to your orators the profits acquired by said defendant and the damages suffered by your orators from the aforesaid unlawful acts, together with such

17 increase upon the actual damages as may seem to this Honorable Court fit and just, according to the provisions of the law relating thereto and that the said defendant, its agents, attorneys, workmen, employees and representatives, and each and every one of them, may be restrained and enjoined provisionally and preliminary as well as perpetually by due orders and injunctions of this Honorable Court from directly or indirectly making, using or selling or causing to be made, used or sold any apparatus in infringement of said patent and be ordered to pay the costs of this suit and that your orators may

18 have such other and further relief as is just and equitable in the premises.

May it please your Honors to grant to your orators the writs of injunction provisionally as well as perpetually as hereinbefore prayed, and also to grant to your orators the writ of subpoena directed to said defendant and commanding it by a certain day and under a certain penalty to be and appear in this Honorable Court and then

and there to answer the premises and to abide 19  
such order and decree as shall be made.

And your orators will ever pray, etc.

THOMAS A. EDISON and NORTH  
AMERICAN PORTLAND CEMENT COMPANY.

By their solicitors,  
Duncan & Duncan,  
73 Nassau Street,  
New York City.

FREDERICK S. DUNOAN,  
HARRY L. DUNOAN,  
Of Counsel.

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STATE OF NEW YORK, }  
County of New York. } ss.

On this 24 day of March, 1908, before me personally appeared J. ROGERS MAXWELL, who being duly sworn, deposes and says that he is the president of the corporation complainant; that he has read the foregoing bill of complaint and knows the contents thereof and that he knows that the said bill of complaint is true, except as to the matters therein stated to be alleged on information and belief and as to those matters he verily believes it to be true.

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J. ROGERS MAXWELL.

Subscribed and sworn to before me }  
this 24 day of March, 1908. }

J. L. Mettler,  
Notary Public, Kings Co.  
Certificate filed in New York Co.  
[SEAL.]

Filed March 2, 1908.

WALTER S. MALLORY, a witness being duly sworn on behalf of the complainants, testifies as follows:

DIRECT EXAMINATION BY MR. HICKS:

MR. HICKS: Complainants offer in evidence a copy of the letter which Complainant's Counsel requested Defendant's Coun-

sel to produce following the answer to Q45 of Mr. Mason's deposition and the same is marked 2533

"Complainants' Exhibit, Letter of December 8th, 1905, notifying Alsen's American Portland Cement Works of Edison Patent No. 802,631."

MR. RICHMOND: Objected to as not proper rebuttal testimony, and even if it be admitted that the letter was mailed by Mr. Dyer, nevertheless it is objected to as not constituting proper notice to the defendant as required by the statute.

MR. HICKS: When proof of the mailing of a letter is given, a presumption arises that the letter was received by the person to whom it was addressed. 2534

Subject to the foregoing objection IT IS STIPULATED by and between Counsel for the respective parties that if Mr. Frank L. Dyer were called to testify in this case, he would testify that as attorney for Thomas A. Edison, at Orange, N. J. on December 8th, 1905, he wrote and signed and sent by the United States mail a letter, a copy of which is set forth in Complainants' Exhibit, Letter of December 8th, 1905, just offered in evidence, enclosed together with a copy of Edison Patent No. 802,631, in a sealed envelope with the postage thereon prepaid, directed to "Alsen's American Portland Cement Works, Alsen, near Catskill, New York."; and that this stipulation shall have the same force and effect as would the testimony of Mr. Dyer if he were called upon to testify and testified to the effect above stated. 2535

2630 Q1. Please state your name, age, residence and occupation?

A. Walter S. Mallory, age 51, residence, Easton, Pa., I am president of the Edison Portland Cement Company, president of the Pohatcong Railroad Company, President of the Architectural Concrete Company, vice-president of the Warren County Warehouse Company, president of the North Jersey Pulp Company, vice-president of the Association of American Portland Cement Manufacturers, and former president of the Association of American Portland Cement Manufacturers during the year 1910.

2637 Q2. Please state fully, and in your own way what you know of the facts leading to the installation of the first two Edison 150 foot kilns at New Village?

2638 A. In 1898 Mr. Edison and I were engaged in the problem of trying to concentrate low grade iron ore, and our work was held up for the lack of money and we were commencing to realize that the work of the previous seven or eight years would probably not be successful commercially, and that the investment of about two and a half million dollars would probably be lost. Of this amount Mr. Edison had personally advanced \$3,100,000, and at this time the concentrating company had an indebtedness of about \$175,000, fifty thousand of which was owed to our banks and \$125,000 to our merchandise creditors, the company not having the money in hand or in sight with which to pay its liabilities, and although Mr. Edison was not liable for the debt except to the banks, and did not have the money in hand to pay the liabilities, he guaranteed the payment of them all, and it took us about five years subsequent to 1898 to pay them in full. During the period of 1898 when the concentrating work was held up for the want of money, Mr. Edison and I had many talks

2639 as to the best way in which to apply the mechanical devices which had been successfully worked out in the concentrating experience, and we decided to apply them to the manufacture of Portland cement. In the concentrating material we had developed the mining of raw material by the aid of steam shovels, the crushing of rocks up to eight and ten tons weight by the aid of the giant crushing rolls, the drying of the raw material by the aid of a vertical drier having very large capacity, the fine grinding of the material by the aid of rolls, the separating of the fine from the coarser particles by the aid of air separation, a system of conveyors for carrying the material to and from the various machines, and when we first started to consider the manufacture of Portland cement, it was our intention to use in connection with the preceding described machinery, the sixty foot kiln which was then in general use. It, however, did not take Mr. Edison very long to figure out and state "the sixty foot kiln is a rotten proposition" and to also state "I believe I can invent a kiln which will be very much more efficient in economy and have a much larger output than a sixty foot kiln". Subsequent to this statement Mr. Edison and myself had several discussions on the subject of a sixty foot kiln and one day in my office he made the assertion "Mallory, I'm going to build a kiln that will make a thousand barrels in twenty-four hours" and he showed me a lead pencil sketch of a kiln with which he expected to accomplish this result. As I recall, this lead pencil sketch was shown to me about January, 1899. About March 1899 we started the building of a wooden model which, as I recall, was about eight feet in diameter and ten feet long. This model we intended to represent one section of the proposed kiln. This model was built so it could be rotated, and with it we tried many experiments at various speeds so that we could

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2548 watch the action of the flow of both fine and coarse material. At first we used a lining made of wood with a plain surface. Subsequently we made wooden linings with various corrugated shapes, and with these various shapes we duplicated the tests already referred to. In June 1899 Mr. Edison purchased from the Lehigh Portland Cement Company 150 barrels of cement clinker so that we might observe the action of the clinker in the wooden model with the various linings to which I have already referred. As I recall in July 1899 we started the erection of a wooden model of the entire cement plant which was built on the scale of two inches to the foot. The object of this model was to get the best possible arrangement of the machinery and also to enable Mr. Edison to make necessary changes in the design before the final drawings were made. This work continued through August and September and during that month photographs were made of the model of the kiln. The photographs to which I refer are dated September 15, September 28th, October 7th and October 7th, 1899 which I understand have already been offered in evidence. After the model of the kiln had been completed to the satisfaction of Mr. Edison, working drawings were made and the castings were ordered as I recall in November, 1899 from the Wheeler Engineering and Condensing Company, Carteret, N. J., and it was decided to have these castings together with the other necessary machinery to operate the kiln shipped to Orange, N. J., so that we might erect the kiln at Mr. Edison's laboratory, that all experimental work done in connection with it might be done under Mr. Edison's personal attention. This was thought wise in spite of the extra expense necessary because the kiln was so radically different from the existing kilns in general use. In November 1899

we engaged the services of Mr. L. H. DeVoe to investigate the matter of linings for kilns which at that time we called roasters. Mr. DeVoe made trips to New York, Philadelphia, Pittsburg, and also visited the plant of the Atlas Portland Cement Company at Northampton, Pa., to investigate the character of this lining then being used by the cement company, and also had interviews with the manufacturers of fire brick as to the possibility of obtaining corrugated fire brick which we had decided to use in the experimental kiln. My recollection in this matter is refreshed by a letter from Mr. DeVoe dated January 3rd, 1900, which I hand to Defendant's Counsel for his inspection. During March 1900 I ordered from various manufacturers the necessary machinery consisting of gears, bearings, hangers, asbestos board, shafting, etc. etc., that the experimental kiln might be put in operation for testing purposes. As I recall the cast iron cylinders were received at Orange, N. J. the latter part of February or early in March 1900, and I had negotiations with Messrs. Drexelmeier & Son, Orange, N. J. covering the unloading and placing the cylinders on the supporting wheels, and on March 20th, 1900 I made an agreement with them that for the sum of \$100 they were to place the cylinders in their respective positions on the friction or supporting wheels, and at the same time made a further arrangement that for the additional sum of \$105 they were to remove the cylinders from their bearings, load them on the cars of the D. L. & W. Railroad for shipment to New Village, N. J., as soon as the experimental work in connection with the kiln had been completed. This is shown by my letter of March 20th, 1900 to P. Drexelmeier & Son, and also by our requisition No. 382 of March 20th, 1900 which was forwarded to P. Drexelmeier & Son. The work

3548 of construction on the kiln was continued from time to time through the year 1900 and on December 11th, 1900, I wrote Mr. Darling as follows:

"I am trying to get together material so the burner test can be made, and wish you would advise me exactly what you are doing towards getting the cement rock ready for us, and when you expect to be able to ship it. Also advise what quantity Mr. Edison has requested you to ship. I would like this information so to be able to take it up with the Railroad Company and see if I cannot get a low freight rate."

3549 On December 13th, 1900 I wrote Mr. Darling "I understand that you have a lot of cement bags on hand. If so, please ship us 1000 which we will use in storing the fine coal for the burner experiment".

Also on December 15th, 1900 I wrote Mr. Darling:

"Yours of the 14th regarding bags noted. The coal has been shipped, and we are anxious to get grinding at the earliest possible moment, and would prefer that you ship us the 1000 bags as requested relying on getting a thousand second hand ones from the Vulcanite People. Please let the bags or a portion of them go forward at once."

3550 On May 23rd, 1901 Mr. William Simpkin who was chief draftsman wrote Mr. Darling:

"Since writing you this A. M. we have taken up the matter of the excavation for the cooler in the roaster house and to-day mail you two prints A-415 revised in this respect. Until we are through with the experimental roaster here it is inadvisable to go any further than this."

On May 31st, 1901 I wrote Mr. Darling:

"The cement burner Mr. Strecker will return to his home tonight. We have arranged with him to come for another week as soon as we are ready. We have promised him a full two weeks' pay and

3551 asked him to send you a memorandum of his expenses. I told him that you would remit promptly as soon as same is received."

On June 1st, 1901 I wrote Mr. Darling:

"Your favor of the 31st inst. at hand. The car of cement rock received here this morning, and we are now unloading same. Confirming a telegram sent you a few moments ago which reads as follows: 'Ship three more cars crushed Cline cement rock.' This makes the total of four cars which we ordered from you."

On June 22nd, 1901 I wrote Mr. Darling:

3552 "We confirm telegram sent you at 10.15 this A. M. as follows: 'Strecker, the burner says he cannot come. Have you another.' (Signed) Edison. Mr. Strecker in wiring us says: 'see letter.' His letter has not yet come to hand, but we have forwarded you the telegram as directed by Mr. Edison, so you might be on the lookout for another burner. Should Mr. Strecker's letter inform us that he can come some other day than Monday, we will wire you."

On July 16th, 1901, I wrote Mr. Darling:

3553 "We sent you this morning the burner whom you obtained for us. We are not practically impressed with his knowledge and on investigation find that he ran a burner for the Vulcanite people a total of about six months, two months of this time using oil and the balance coal. We were not impressed with his knowledge and yesterday he got the burner so very hot that one of the large castings cracked. There, however, was a defect in the casting which probably accounts for the trouble. We are putting on bands and will have the thing ready in a few days.

We are also fixing the feeding device so it can be run in or out and turn in any direction so that we can deliver the coal where we choose. This will take some days.



3554 As to the results we obtained in test of yesterday, we started in feeding about 14 tons of cement rock per hour, using 50 pounds of coal per barrel, and the front end of the burner chilled and all the cement rock became fluid, showing what an intense heat can be obtained from a small amount of coal if it is powdered fine enough. One thing we are very sure, that our estimate of 50 pounds of coal per barrel of cement is conservative. We also believe having the long clinker zone, we will be able to accomplish the work with a very much lower temperature, which, of course, means less fuel per barrel, and a much greater output. The chances are the next time we start we will not get an expert here but feel our way carefully, as we do not find them of very much value, our appliance being so very much different from the apparatus with which they are familiar.

3555 As far as the cracking of the cylinder is concerned, we do not attach much importance to that, as we can put bands on all the cylinders, and make them so strong that there will be no trouble of cracking, even if the castings are defective."

On July 19th, 1901, I wrote Messrs. Pilling & Crane, Philadelphia, Pa:

3556 "We have made further tests on the roaster and find we are still unable to get the best at the front end, for the reason the guns are stationary and deliver the material too far up; so we have decided to put the gun carriage on a movable table, so that we can deliver the powdered coal in the center of the roaster as at present, or anywhere along the side, top or bottom. By this means we will be able to deliver the coal exactly where it is needed. In our test we have been able to make clinker with 50 pounds of coal per barrel, so the only thing left to be determined is what degree of economy of fuel and output we can get. It will take some days to make the change.

We have most of the material on hand and will go ahead with the work night and day until it is completed. 3557

Mr. Edison leaves to-morrow morning for Lake Chataqua to take a very much needed rest. He will be gone two or three weeks, but it has been arranged, however, that we shall go ahead with the roaster experiment in his absence. He says from the experience of the last test there is no reason why it cannot be successfully operated in his absence."

On July 24th, 1901, I wrote Mr. Edison at Chataqua, N. Y.:

"I beg herewith to enclose cablegram just received from London which explains itself. 3558

We are pushing ahead on the gun carriage for the roaster, also putting on straps. I understood from you the last afternoon before you left, that we were to go ahead and make the tests on the roaster as soon as it was in working condition, and see what could be done in the way of making clinker. Mr. Simpkin's understanding is that we are to simply make tests with the fuel and not make any clinker. Please advise your wishes."

Mr. Darling says that he can get for us the first burner any time we need him. As I recollect it, he was the most intelligent of the three we have had. If you desire to have clinker made in your absence, please state whether we shall send for this burner. We will be ready in two or three days to start up."

On August 7th, 1901 I wrote Mr. W. S. Pilling, treasurer of the Edison Portland Cement Company:

"Replying to yours of the 6th inst., asking the condition of the work on the roaster, beg to state that during the last test which was made a few days before Mr. Edison left for his vacation, we

2500 made a small amount of clinker, using our own raw materials, and since that time we have been testing the cement which was made from this clinker.

We sent you under separate cover three briquettes made from this particular lot of clinker. These briquettes were exposed to the air for twenty-four hours and had been in water since July 19th. We have had several of them tested for tensile strength and they show up very well. The tests on the burner, when this clinker was made, showed that we had an immense amount of heat and we fully believe that the roaster will give the capacities that Mr. Edison expects.

2501 During Mr. Edison's absence, we have ground up the larger quantity of cement rock, and now have about 150 tons of cement rock and limestone, 200 mesh and finer. The roaster is ready for further test and we had intended going ahead with it, but received word from Mr. Edison a few days since not to make the test until he returns, as he preferred to watch the action of the coal and the clinker; so we will be unable to do anything further until his return. One thing you may put down as certain; the roaster will make satisfactory clinker and it is now simply a question of the minimum amount of coal per barrel we can obtain and the maximum output.

2502 We also know from tests already made that our cement rock and limestone will make a high grade of cement, as you will see from the three briquettes we send you. Water discolors the briquettes some, so we have had them cleaned to show true color."

On August 9th, 1901 I wrote the Edison Portland Cement Company, Philadelphia, Pa.

"We are pleased to receive copy of Mr. Reid's letter enclosed with yours of the 8th inst. We felt

2503 confident that Mr. Reid would live up to his subscription, and are very glad he has been so well impressed.

Regarding burner, we have 150 tons of cement rock and limestone all ground to pass 200 mesh screen; also have the necessary coal for burning and yesterday afternoon had the burner in operation, testing the changes on the guns to see if they were all right. We made some little clinker yesterday afternoon, but only a small lot, as Mr. Edison had directed us since he has been away not to go ahead with the test until he returns.

2504 The test yesterday afternoon again confirmed the previous results, and showed that we are able to get a very long clinkering zone, and put it in any part of the burner we desire. One time we had the clinkering zone in the front in the first fifteen feet of the burner nearest to the gun, and subsequently we had it at the far end to such an extent that solid flame came out of the smoke stack. The clinker made yesterday afternoon was of very good quality, but, of course, this does not indicate much as there was only a very small quantity of it put through.

As written you before, the only questions yet to be solved are the minimum quantity of coal required per barrel of cement, and the maximum output of clinker per hour; as every time we have put cement rock through we have made good clinker."

2505 After additional tests had been made it was decided to take down the kiln and ship it to the cement plant at New Village, N. J., and on October 15th, 1901 we made an arrangement with P. Dexheimer & Son, Orange, N. J. to take down, cart, and load on the cars of the D. L. & W. Railroad Company, securely stowing the various parts same as when they arrived at Orange, N. J., for the sum of \$245, the following goods to be covered in the

above: "Cooler complete with gears, shafts, stands and bearings, cast iron rings built in brick work, all roaster cylinders, all carrier wheels with shafts and bearings, bearing gear, shaft, bearings and stands for driving gear, thrust wheel and stands, Armington & Sims engine" as is shown by requisition 3440 which confirmed our letter to Drexelmeier & Son of October 9th, 1901. The original contract to which I have already testified and which is shown by my letter of March 20th, 1900, by which Drexelmeier & Son were to do the work for \$165, was correct, the difference between the \$245 and the \$165 being represented by the additional machinery which he took down and carted, which was not covered by the first arrangement.

The experimental kiln which was erected at Orange, N. J. was 150 feet in length made up of two sections, 100 feet of which was composed of cast iron cylinders which revolved, and 50 feet of a brick chamber containing paddles which were mechanically operated so as to convey the raw material into the revolving part of the kiln. When the experimental kiln was shipped to New Village for erection at the cement plant we ordered additional cast iron cylinders to make its length 150 feet, all of which was to revolve, and at about the same time we ordered a second kiln 150 feet in length. When these kilns were put in operation, and I would report to Mr. Edison that we had obtained an output of from 450 to 550 barrels per day he would be very much disappointed, and would say to me that we were not beginning to get anything like the capacity of the kilns, and I would return to the cement plant with the determination, if possible, to have the output increased. As we had more experience with the operation of the kiln we were enabled to get the outputs up to 700 and 800 barrels per day, and each time I would report

the result to Mr. Edison he would always insist that a much larger capacity was possible. Finally, after a good many trials, we were enabled to obtain an output of 1000 barrels in 24 hours, thus making good Mr. Edison's prediction when he first started at work on the kiln. In connection with the kiln work, and in my contact with the cement manufacturers and some of our own stock holders, during the development and experimental period of the work, I had many discussions and arguments as to the probability of the kiln being successful and at first I was somewhat skeptical that Mr. Edison would be able to obtain a large increase in output which he expected, but after the early tests I was convinced that he was right. I recall one of our stockholders stating to me that some friend who was interested in the manufacture of cement stated to him that the Edison kiln could never be a success, that if it could be made to run mechanically it was doubtful that clinker could be produced in it, and if clinker was produced in it, that it would not be of good quality, and the stockholder asked me if I was sure that we were on the right track, and were warranted in making the large investment necessary in installing two kilns each of 150 feet in length, and I told him that I had no question as to the ultimate outcome, that from the results of the tests I felt that Mr. Edison's expectations would be realized and that the future would prove that Mr. Edison had made a great invention which would ultimately be recognized as such by the cement industry as a whole, and such has proven to be the case.

Mr. RICE: Objected to as largely secondary, and therefore incompetent.

Mr. HICKS: The objection upon the ground that the answer of the witness is largely secondary is so indefinite that Con-

2572 plaintiffs' Counsel can make no application of the objection to any specific part of the answer. If the objection is made specific, Complainants' Counsel will meet the objection by further testimony.

RECESS.

(AFTER RECESS)

2573 Mr. RICHMOND: Attention is directed to the following: Throughout the answer allusions are made to what Mr. Edison realized, or intended, or figured out, or said. On these matters it is believed that Mr. Edison would be the most competent witness. See also reference to the lead pencil sketch, (typewritten page 944, line 6), Mr. DeVoe's investigation (top of typewritten page 946), quotations from letters (typewritten pages 947, 948, 949, 950, 951, 952, 953, 954), arrangement with Dexheimer (typewritten page 955, line 4), contract and letter (same page, lines 15 to 17), Mr. Edison's disappointment and what he would say (typewritten page 956, lines 11, 12, 18, 19, 22), discussions and arguments (typewritten page 957, line 2), statement by stockholder (same page, line 7) question by stockholder (same page, line 13) alleged recognition that Mr. Edison had made a great invention (same page, line 22).

2574 Mr. HICKS: The witness is as competent a witness as Mr. Edison to prove what Mr. Edison did or said or intended within the knowledge of the witness. As to the pencil sketch, it will be offered in evidence. As to DeVoe's investigation, the witness has testified from his direct knowledge. As to

2576 quotations from letters, the letters have been set forth in full and will be offered in evidence if Counsel for Defendant so desires. The subject matter of the letters is confirmed by the witness's testimony and references to the letters was made in confirmation of the recollection of the witness.

Q3. Referring to the letters of December 11th, 13th, and 15th 1900 and May 23, 31, June 1, 22, July 16, 19, 24, and August 7, 9, 1901, which you read into your answer to the last question, please state whether you read in to your answer the entire contents of each of those letters?

A. Yes.

Q4. I show you letters dated March 3, 5, 7, 12, 14, 15, 18, 20, 21, 26, 28, 29, 27, 27, 29, 29, and April 4, 5, and June 19, 1900, and ask you to state whether, to your knowledge, those letters were written at their respective dates?

A. I believe that they were.

Q5. I also show you letters dated July 10, August 28, October 5, December 17, 1901 and April 19 and July 15, 1902, and ask you to state whether the said letters were written at their respective dates?

A. I believe that they were.

Q6. In what form are the letters enumerated in Q8 and set forth in your answer to Q2, and the letters enumerated in Q8 4 and 5?

A. All the letters to which you refer are letter press copies of the original letters.

Q7. Do you know whether those letters are correctly copied in the letter press book?

A. I believe that they are.

Q8. Do you know whether the facts are correctly set forth in those letters?

Mr. RICHMOND: Objected to as leading.

860 Deposition of Walter S. Mallory.

2578 Mr. HICKS: The witness has already testified that he wrote or received the more pertinent of the letters, and has quoted them in full.

A. Yes, so far as my understanding of the subject matter at the time they were written.

Q9. Did the transactions referred to in the letters take place, to your knowledge, at the times indicated in the letters?

Mr. RICHMOND: Same objection.

A. Yes.

2579 Q10. Refreshing your recollection from those letters, contained in the letter press book, can you testify as to whether or not the transactions mentioned in the letters took place at the dates indicated in the letters?

Mr. RICHMOND: Same objection.

A. Yes.

Q11. Please state then whether the transactions mentioned in the letters took place at the dates indicated in the letters.

Mr. RICHMOND: Same objection.

2580 A. I believe that they did.

Mr. HICKS: Complainants offer in evidence the letters quoted by the witness in his answer to Q2 and mentioned in Q3;

Complainants also offer in evidence the letters mentioned in Qs 4 and 5, and the same are marked

"Complainants' Exhibit, correspondence produced by Mr. Mallory relating to the installation of the roaster at the Edison laboratory, West Orange, and at the New Village Plant."

Deposition of Walter S. Mallory. 861

IT IS STIPULATED between Counsel for the respective parties that copies of the letters comprising the foregoing exhibit may be substituted for the letter press book copies and marked as above indicated, subject to correction by comparison with the letter press book copies at any time which will be produced by Complainants' Counsel upon reasonable notice from Defendant's Counsel.

Q12. Can you produce the lead pencil sketch which, in answer to Q2, you say Mr. Edison exhibited to you in your office about January, 1899?

Mr. RICHMOND: Objected to as secondary and incompetent; it is believed that the man who showed the sketch is the most competent to testify in regard to it.

A. I believe that I can.

Q13. Please do so.

A. I believe this to be the lead pencil sketch which he showed me at that time.

Q14. This sketch sets forth certain legends such as "40—lined with shaped brick 6 thick—lined single fire brick—dia outside 7 ft." and others. In whose handwriting are these legends and in whose drawing is the sketch?

A. I should say that in all but two cases the handwriting is that of Mr. Edison, and the drawing was made by Mr. Edison.

Q15. What are the two cases where the handwriting is not Mr. Edison's?

A. "Stack 5 feet inside of lining", and "flange 2½ inches thick, 5 inches".

Q16. Can you say in whose handwriting these two legends are?

2684 A. I believe it to be the handwriting of Mr. Emil Hertel.

Mr. HERTZ: The sketch produced by the witness is offered in evidence and marked "Complaints" Exhibit, Edison Sketch No. 1, January 1899".

Mr. RICHMOND: Same objection.

Mr. HERTZ: The witness who saw the sketch and received Mr. Edison's statement in regard to it is as competent to testify in regard to it as Mr. Edison who made the sketch.

2685 Q17. Referring to the four blueprint photographs of September 16th and 28th and October 7th and October 7th, 1899, can you state what length each section of the rotary parts of the two model kilns was intended to represent, according to the scale of two inches to a foot, which you have already given?

A. Ten feet, except in the case of the end sections which were each five feet.

Q18. In your answer to Q2 you say that the experimental kiln which was erected at Orange, N. J. was 150 feet in length made up of two sections, 100 feet of which was composed of cast iron cylinders which revolved and 50 feet of a brick chamber containing puddles, which were mechanically operated so as to convey the raw material into the revolving part of the kiln. Please refer to the book of photographs and state whether you find this 150 foot kiln shown by any of the photographs?

A. The second and third of the photographs marked April 1st 1900 show the 150 foot kiln to which I have referred, and I also find that the first photograph dated April 1st, 1900 shows the 150 foot kiln already referred to.

Q19. Please look at the photograph marked "Hertel—Feb. 4-92", and state what it shows? 2687

A. It shows the 150 foot kiln built of cast iron sections for its full length as erected at the cement plant at New Village, N. J.

Q20. Do you recollect the number of this kiln at the New Village plant?

A. I believe it to be the kiln which we call No. 1 erected at the New Village plant.

Q21. And did kiln No. 1 of that date (Feb. 4 1902) include any part of the experimental kiln set up at Mr. Edison's laboratory at West Orange?

Mr. RICHMOND: Objected to as lending. 2688

A. 100 feet of it was composed of the same sections as those used at Mr. Edison's laboratory at Orange, N. J.

Q22. When was it that the 100 feet, constituting the rotary part of the laboratory experimental kiln were shipped from the laboratory to New Village?

A. About October, 1901.

Q23. Please state who caused this book of photographs to be made up, referring to the book containing the four blueprint photographs and the three photographs dated April 1st, 1900, and the photograph dated February 4, 1902, mentioned in the questions just put to you? 2689

A. The book was made under my direction.

Q24. The book contains apparently 100 photographs or so. What have you to say in regard to the arrangement of those photographs with respect to time?

A. When the book was started it was the intention to have photographs taken from time to time so that we might have a series of pictures in consecutive order showing the progress of the work.

2500 Q25. Does each photograph bear a date?  
A. They do, except 13 between the period of April 1st, 1900 and May 31st, 1900.  
Q26. Do the thirteen which have no dates appear to be in their proper place chronologically?

Mr. RICHMOND: Objected to as leading.  
Mr. HICKS: The witness may say that they do not.

A. They do, as they relate to the opening of our quarry and the excavation of a rock crusher, drier, and rock stock houses, which were among the first construction work which we did.

2501 Q27. Now, since you have examined the photographs in the book with regard to the chronological order thereof, and the dates thereof, please state whether or not the photographs appear in the book in chronological order?

A. They do.

Q28. The first three photographs dated April 1st, 1900, which have been offered in evidence and to which you have referred, have the date April 1st, 1900 written thereon. Please state whether that date is correct for each of these three photographs?

A. I believe it is correct.

2502 Q29. How did it come about that the dates were put upon all of these photographs contained in this book, excepting the thirteen which are without dates?

A. The photographs taken at Orange were dated in accordance with my instructions, and the first thirteen photographs taken at the cement plant at New Village, N. J. were received without being dated. I then gave instructions to have all subsequent photographs sent to us with the dates on.

Q30. Were these photographs pasted in the book

all at once, or what is the fact with regard to the pasting of the photographs in the book?

A. They were pasted in the book from time to time as fast as we received them, so that we might have at all times a pictorial record of the progress of the construction of the plant.

Q31. Where were you during the time that you wrote and received the letters which you have produced, and some of which you have quoted in answer to Q2?

A. At that time I made my headquarters at the Edison laboratory, Orange, N. J.

Q32. And where was Mr. E. A. Darling during the same time?

A. The early part of the period he was also located at the Edison laboratory, Orange, N. J., and I believe Mr. Darling was located at the cement plant at New Village, N. J., the larger portion of his time after about June 1st, 1900.

Q33. Did you preserve any of the clinker or cement made during the trials of the experimental roaster at the laboratory; and if so, please produce and describe the same?

A. I did. I preserved some clinker in an envelope marked "first clinker made at Orange, July 15th, 1901." This clinker was kept in the envelope in my desk at Orange, N. J., until quite recently when I put it in a glass bottle to forward it to Mr. Hicks. I also preserved a sample of the "first cement made from our rock and put through the roaster at Orange", N. J. I also preserved a briquette made from the cement which was ground from the first clinker made at Orange, N. J.

Q34. I understand that the cement contained in the bottle produced by you which is labeled "first cement made from our rock and through roaster at Orange" and "cement—1st firing—7-15-01" followed by an analysis of the ingredi-

2500 ents and "test 3 days 290 lbs.", and the briquette produced by you labeled "made from first clinker made at Orange—7-15-1901"; and "7-22-01—290 lbs. 3 days" were made from the clinker produced at the time of the trial when the clinker labeled "first clinker made at Orange, July 15, 1901" was made. Is this correct?

A. Yes.

Q35. In whose writing are the labels on these three specimens of clinker, cement and briquette; and when were the labels made?

A. The writing on the envelope "first clinker made at Orange, July 15, 1901" the label on the cement "first cement made from our rock and through roaster at Orange," S. J., and the label on the briquette "made from first clinker made at Orange 7-15-1901" are in my handwriting, and were made at the dates given. The label on the bottle containing the cement "cement 1st burning 7-15-01" giving an analysis of the cement and also "test 3-days 290 lbs.", also the lead pencil marking on the briquette of "7-22-01 290 lbs. 3 days," were made as I recall by the chemist who made the analysis and conducted the physical tests. The physical test was undoubtedly made on July 22nd, 1901, and the chemical analyses were undoubtedly made immediately after July 15th, 1901.

Q36. Have you any information with regard to the number of kilns under 100 feet in length, and 100 feet or over 100 feet in length in use in the United States from 1906 to 1911 inclusive; and if so, state where you obtained the information and give the same.

A. I wrote the Department of the Interior, United States Geological Survey, D. C. I received reply from them as follows:

October 12th, 1912. 2500

In reply to your letter of October 10th, the following is a statement of the number of rotary kilns reported to the survey used in the manufacture of Portland cement in the United States from 1906 to 1911:

	1906	1907	1908	1909	1910	1911
Under 100 ft.	586	561	545	555	418	357
100 ft. and over	257	344	389	375	482	559
Total—	843	905	934	930	900	916

Mr. RICHMOND: Objected to as secondary and incompetent. 2600

Mr. HICKS: Complainants offer in evidence the clinker, cement, and briquette produced by the witness, and the same are marked as follows:

Complainants' Exhibit, First clinker made at Orange, July 15th, 1901;  
Complainants' Exhibit, First cement made at Orange from New Village rock, July 15th, 1901;  
Complainants' Exhibit, Briquette made from first clinker made at Orange, July 15th, 1901.

Adjournd to October 17th, 1912, at 10:30 A. M.



2902 New York, October 17th, 1912.

Met pursuant to adjournment.

Present: Parties as before.

WALTER S. MALLORY, resumes the stand.

DIRECT EXAMINATION CONTINUED BY Mr. HICKS:

Q87. At the time of the experimental work at Orange or when the first two 150 foot kilns were installed at New Village, did you learn anything about the cement output and fuel consumption of sixty foot kilns in use?

A. Yes.

2903 Q88. Please state the source of your information, and what it was?

A. I obtained the information from reading out of pamphlets or books on the subject of the manufacture of cement, and also from discussion with some of the manufacturers. As I recall the output ranged from 150 barrels to 200 barrels in twenty-four hours, and the coal consumption from 120 pounds to 150 pounds per barrel.

Mr. RICHMOND: Objected to as secondary.

Q89. When was the Edison Portland Cement Company incorporated?

2904 A. June 3rd, 1899, in the State of New Jersey.

Q90. While the experimental work on the kiln was being carried on by Mr. Edison at his laboratory at West Orange, and up to the time that the rotary part of the experimental kiln was shipped from the laboratory to New Village in the Fall of 1901, what was being done with regard to a cement plant at New Village?

A. We were getting out the detail plans and erecting the buildings, and ordering the machinery for various parts of the plant, such as rock crusher, drier, stock houses, air separator houses, roll

2905 houses, and so forth, and also installing the necessary machinery in these particular houses.

Q41. With regard to the kiln itself, was anything done at New Village before the rotary part of the experimental kiln was shipped from the laboratory?

A. No.

Q42. Can you give any statement as to the proximate cost of the making of the invention of the Edison kiln upwards of 100 feet in length described in the patent in suit No. 802,631?

Mr. RICHMOND: Objected to as somewhat vague and indefinite.

Mr. HICKS: So is the objection.

2906

A. If you mean the cost of the kiln including the work of development I would say that approximately it cost seventy-five to a hundred thousand dollars.

Q43. Is the experimental work at the laboratory at West Orange included in the "work of development"?

Mr. RICHMOND: Same objection.

A. Yes.

Q44. Has there been, to your knowledge any acquiescence among manufacturers of Portland cement in this country in the validity of the Edison patent in suit No. 802,631?

2907

A. Yes. License agreements have been granted by Mr. Edison to about a half a dozen of the larger cement companies. The companies to which I refer are the Atlas Portland Cement Company, the Lehigh Portland Cement Company, American Portland Cement Company, Vulcanite Portland Cement Company, Alpha Portland Cement Company, Lawrence Portland Cement Company and the Edison Portland Cement Company.

870 Deposition of Walter S. Mallory.

2008 Q45. Has the price of cement fallen or risen since the Edison kilns upwards of 100 feet in length went into general use?

A. It has fallen.

Q46. Can you give any reason for the fall in the market price of Portland cement since the Edison long kiln went into general use?

A. The industry has had a capacity during a portion of that time to produce more cement than the market demanded.

Q47. Do you mean that the cement producing capacity of the country has increased?

A. Yes.

2009 Q48. And what had caused the increase of the cement producing capacity?

A. Larger outputs from the kilns, and new plants.

Q49. Why have the kilns produced a larger output?

A. Because there has been a great increase in the number of kilns in excess of 100 feet in length.

Mr. HICKS: Complainants offer in evidence an extract from Mineral Resources of the United States for 1911, and the same is marked

2619 Complainants' Exhibit, Extract from "Mineral Resources of the United States", for 1911, pp. 12 to 14, published 1912 by Department of the Interior, U. S. Geological Survey.

Mr. RICHMOND: Objected to as secondary and incomplete.

Mr. HICKS: Complainants' Counsel has not, it is true, offered the entire publication; because that seems unnecessary since the material facts are set forth in the Extract offered in evidence. The publication is one for which Defendant's Counsel has, as

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pointed out during the deposition of Professor Carpenter, vouched.

Mr. RICHMOND: The pointing out referred to seems to have consisted in the allegation by Complainants' Counsel. The attention of the Court is directed to the evasive way in which the challenge to show where any such voucher appears was met following RDQ504 of the Carpenter deposition.

DIRECT EXAMINATION CLOSED.

CROSS EXAMINATION BY Mr. RICHMOND:

QX50. In your answer to Q2 you suggested that two and one half million dollars would probably be lost; was it lost?

A. It was.

QX51. You say "it took up about five years subsequent to 1898 to pay" certain obligations in full. To whom do you refer by "us"?

A. Mr. Edison and myself, Mr. Edison advancing the money and the negotiations with the creditors being conducted by myself.

QX52. Were these payments charged directly or indirectly against the cement business?

A. No.

QX53. In what respect did you understand Mr. Edison to mean that the sixty foot kiln was "rotten"?

A. Due to the figuring which he had done, he believed that a device could be invented which would be much more efficient in coal consumption and with a larger output.

QX54. Yes, but what did he think was "rotten" about the sixty foot kiln?

2074 A. Its small output and high coal consumption.  
XQ55. Is that all?

A. Those were the main points that he had in mind.

XQ56. In addition to these main points, what were the others?

A. His desire to improve on existing conditions.

XQ57. No, I mean the other points in which the sixty foot kiln was supposed to be "rotten".

Mr. HICKS: Defendant's Counsel should ask the witness whether he recollects any additional expression or statement made by

2075 Mr. Edison, or anything done by Mr. Edison. The present questions are directed toward eliciting from the witness an apparent statement as to what was going on in Mr. Edison's mind irrespective of any expression thereof.

A. I do not know as I can recall all his objections to the sixty foot kiln but I do remember that Mr. Edison thought it would be a decided improvement if in a new kiln, which he expected to build, we could arrange to use cast iron instead of the plate steel used in the sixty foot kilns.

2076 XQ58. Can you recall any more respects that Mr. Edison may have mentioned or suggested in which he thought the sixty foot kiln was "rotten", and if so, please mention them all?

A. I do not recall any further points, but as already stated, my impression at the time was that the principal thing he had in mind was the small output and high coal consumption as compared with what he thought it was possible to be obtained.

XQ59. What was the extent and nature of Mr.

Edison's information up to this time in regard to 2017 sixty foot kiln practice?

Mr. HICKS: Objected to as clearly incompetent, for the reason that the witness can state only what he observed in respect to the subject matter of the question.

Mr. RICHMOND: See the direct examination; it is submitted that this question is a highly proper cross question, without waiver of objection.

Mr. HICKS: If the question attempts to obtain from the witness a statement of the extent and nature of Mr. Edison's information, without being limited to the knowledge or observation of the witness, it is entirely incompetent.

A. I can only answer in a general way by stating that Mr. Edison has a habit in all of his experimental work of obtaining by reading and from other sources, as much of the available information relating to the work he has in hand as it is practicable for him to get, and his work in connection with the cement plant was carried along this line.

XQ60. That is as specific a statement as you can make in answer to the question, is it?

A. I can answer that by stating that I personally obtained some books upon the manufacture of cement, and that Mr. Edison and I personally visited one or two plants where sixty foot kilns were installed, and as usual he asked many questions regarding the operation of the device.

XQ61. What plants did you visit, and when?

A. As I recall we visited the plant of the Bonneville Cement Company, and I think the other was the Coplay, but I am not so sure about that. I

2020 think it was in 1898 during the period when the work at the concentrating plant was discontinued for the lack of money.

XQ62. How many kilns were there at these plants that you visited?

A. I don't remember.

XQ63. Did Mr. Edison ever suggest that he considered the sixty foot kiln to be "rotten" because it was made of wrought iron?

A. He thought the use of cast iron would give some mechanical advantages, because the cast iron would not warp as much as the steel.

2021 XQ64. Did he think that having only two carrying tires was a point against the sixty foot kiln?

Mr. HIGGS: Objected to as calling for the thought of Mr. Edison for the reasons stated.

A. I have heard him say that he believed it would be an advantage to have the kiln supported in more than two places, if made of cast iron.

XQ65. But you do not recall his saying or suggesting that having only two tires was a point against the sixty foot kiln?

A. No.

2022 XQ66. Have you any picture or pictures of the wooden model 8 foot in diameter and 10 feet long which you started building in March 1897?

A. No.

XQ67. You spoke of the laboratory kiln as being "so radically different from the existing kilns in general use"; did these radical differences comprise making the kiln of cast iron instead of wrought iron, having ten sets of carrying rolls instead of two, having a brick chamber with puddles at the upper end, having a fluted lining in the kiln, and having a novel form of coal injector burner?

A. Yes.

2023 XQ68. Just what was the matter that you engaged Mr. L. H. DeVoe to investigate?

A. We wanted to learn the character of the fire brick used in the sixty foot kiln, by whom they were manufactured, the experience of the cement manufacturers as to the life of the fire brick, and whether or not we could obtain the corrugated fire brick.

(Defendant's Counsel obtains from the witness the letter which Mr. DeVoe wrote, dated January 3rd, 1900.)

2024 XQ69. The letter of Mr. DeVoe dated January 3rd, 1900 which you handed to me for inspection, in the course of your long answer to Q2 contains the following paragraph, does it not:

"I would like to say, however, that never before have I had so tough a proposition in placing an order, for the manufacturers did not seem capable of handling new work and did not care to accept".

A. Yes, the letter contains such a paragraph and refers to the corrugated fire brick.

2025 XQ70. Did you use any grinding machinery in connection with your experiments at the laboratory, and if so, please state briefly what it was?

A. We had a set of rolls and one air separator, so that we could prepare the raw material for use in the experimental kiln.

XQ71. How about grinding the coal and the clinker.

A. The raw material, coal and clinker was all ground in these rolls and separated by the air separator.

XQ72. Were they giant rolls?

A. No, they were small rolls.

2020 XQ73. Did you use a clinker cooler in connection with the experiments at the laboratory?

A. I don't think we did.

XQ74. What are the initials of Mr. Streckel and where is he now?

A. I don't remember his initials and have no knowledge as to his present whereabouts.

XQ75. In your letter of July 16th, 1901 to Mr. Darling, you referred to a party who "got the burner so very hot that one of the large castings cracked"; what did you refer to here by the term "burner"?

2027 A. I referred to the operator whom he sent us to conduct the kiln experiment.

XQ76. But you said "he got the burner so very hot". What was it that became hot?

A. I should have said in my letter it was the kiln which became very hot.

XQ77. Then the large casting that cracked was one of the cast iron kiln sections, was it?

A. Yes, but you note that I state in my letter that there was a defect in the casting which probably accounts for the trouble.

XQ78. And the bands that you were putting on were to encircle the kiln and bind the parts of the casting together, were they?

2028 A. Yes, we put bands on the cracked section to prevent further cracking when it was under heat.

XQ79. What did you refer to in that same letter by the term "feeding device"; did you mean the coal injector nozzle?

A. Yes.

XQ80. Are you still sure of your estimate of July 16th, 1901 or earlier, that fifty pounds of coal per barrel of cement is conservative?

A. No, we underestimated the amount of coal necessary at that time.

XQ81. In that same letter you said "the front end of the burner chilled"; just what was it that was chilled.

A. I should have stated the front end of the kiln chilled.

XQ82. Do you mean that the front end of the kiln was water-jacketed, or something of that sort?

A. The front end of the kiln was not water-jacketed. What I meant was we were unable to hold the heat in the front end of the kiln.

XQ83. How long did you continue feeding in fourteen tons of cement rock per hour?

A. I don't remember.

XQ84. Who were Messrs. Pilling & Crane to whom the letter of July 19th, 1901 was addressed.

A. Mr. W. S. Pilling was treasurer of the cement company, and both Pilling and Crane were stockholders and directors of the cement company.

XQ85. What do you refer to by the term "guns" in this same letter?

A. A device for feeding the coal.

XQ86. For injecting it into the kiln?

A. Yes.

XQ87. How many of them were there?

A. I think at that time there was one device having two feeding nozzles.

XQ88. This made two guns, did it?

A. Practically one gun with two nozzles.

XQ89. Did the cablegram mentioned in the letter of July 24th, 1901 relate in any way to the cement business, and if so, what was it?

A. I do not recollect what it was, but doubt very much that it referred to the cement business.

XQ90. Please give the initials of the Mr. Reid referred to in your letter of August 9, 1901, his address then and now, and whether he continued to be "well impressed."

A. W. P. Reid. I think his home is in Babylon,

2932 Long Island, and he is still a stockholder and director.

XQ91. Was he ever dissatisfied after that letter?

A. I never heard him express any dissatisfaction with the kiln, and I assume that what I had in mind when the letter was written was Mr. Reid's impression of the kiln experiments which we had conducted at Orange, N. J.

XQ92. You say you have never heard him express any dissatisfaction. Have you known of his expressing any dissatisfaction?

2933 A. Not in connection with the kiln. All our directors have expressed great dissatisfaction from time to time as to the price at which we have had to sell cement, and I have heard Mr. Reid express his opinion along this line several times.

XQ93. You spoke of Mr. Edison being very much disappointed when you would report to him that you had obtained an output of from 450 to 550 barrels per day; when was this?

A. When we first started the preliminary manufacturing operations at the cement plant at New Village, N. J.

XQ94. When was that?

A. I think it was the early part of 1903.

2934 XQ95. Then you said that as you had more experience with the operation of the kiln you were enabled to get the outputs up to 700 and 800 barrels per day; when was this?

A. As near as I can remember now I think it was during 1904 or possibly 1905.

XQ96. Then you said that finally after a good many trials you were enabled to obtain an output of 1000 barrels in twenty-four hours; when was this?

A. I think it was in 1905.

XQ97. Wouldn't your records show exactly when these figures were attained?

A. I think so.

2935 XQ98. Then I will ask you before this examination closes to produce your original record or records, showing the date and circumstances of your obtaining an output of from 450 to 550 barrels, then 700 to 800 barrels, and finally 1000 barrels?

A. I am not so sure as that we have the records of our earlier work, but I can find those of the later period.

XQ99. I understand that you did not get your plant in regular commercial operation until 1903, is that correct?

2936 A. My recollection is that we started our plant in operation either in December 1902 or January 1903, and it was continued in operation until March 1903, when we had a coal explosion which caused us to discontinue manufacturing operations for several months.

XQ100. Were your operations fairly normal throughout the calendar year 1904?

Ma. HICKS: Objected to as not proper cross examination. The direct examination touched upon no such matter.

A. I really don't remember how much of that year we did operate it.

2937 XQ101. I understand that you started with two kilns, please give us the dates when the other kilns were added?

Ma. HICKS: Same objection, and if it continues the witness will be advised not to answer, unless instructed to do so by the Court.

A. As I recall we put in kilns 3 and 4, but I do not now recollect just the dates. Subsequently we put in six additional kilns, I think this was done in 1905. When I refer to 1906 I mean in relation to the six additional kilns.

2038 XQ102. In connection with your answer to XQ98, please tell us what was the regular normal output of your kiln day by day in each of the years 1904 and 1905?

Mr. HICKS: Same objection. The witness is advised not to answer such questions unless directed so to do by the Court. The witness has not been interrogated with regard to the operation of the New Village plant, nor has the witness at any time operated the New Village plant; nor does it appear that the witness has any knowledge which would enable him to answer such questions. He was not produced and interrogated with regard to such matters.

2039

A. On advice of counsel I decline to answer unless directed so to do by the Court.

XQ103. The records of your company are under your control and accessible to you, are they not?

A. Yes.

XQ104. I will state frankly what I want to get at, and ask you to help me out. In your direct examination you told about getting outputs of 450 to 550 barrels, then later 700 and 800 barrels per day, and finally 1000 barrels in twenty-four hours. This was toward the end of your long answer to Q2. It seems to me that normal, everyday, average outputs would be much more instructive and significant, and would have a decided bearing on what is to be learned from these extreme outputs you have stated. Also, you have referred to making cement at the laboratory with 50 pounds of coal per barrel, but it seems to me that the normal, average, everyday coal consumption is much more important and significant. I will therefore ask you before this examination closes to produce your records for the years 1903 and 1904, and show us what was the number of kilns in operation in those

2040

years, the number of days they were in operation, the total output of cement, and the total weight of fuel burned in the kiln so that the data for which I inquire can be deduced accurately from primary evidence.

2041

Mr. HICKS: As none of this matter has any basis in the direct examination and is a mere fishing expedition on the part of Defendant's Counsel Complainant's Counsel will object to any such procedure. The present question is objected to as it does not ask the witness for any fact, but merely asks him as to what he will do in the future, and that is not a subject matter of testimony.

2042

A. I will be guided by advice of counsel in this matter.

RECURS.

(AFTER RECURS)

XQ105. You speak of being enabled to get the larger outputs of 700 and 800 barrels per day "as we had more experience". Please state the nature of this increased experience?

2043

A. Our operators consisting both of our superintendent, foreman, and the men in direct charge of the kilns, due to their experience, were enabled to better understand the capacities of the kilns, and also to manipulate better the coal feeding and raw material devices, and also understood better the manipulation of the draft.

XQ106. Who were your superintendent and foreman and men in direct charge of the kilns?

Mr. HICKS: Objected to as not proper cross examination. Such questions can have no bearing on the direct examination.

2044 A. Mr. Darling was our first superintendent, and subsequent to his death in 1903 Mr. Mason became our superintendent. We have had several foremen in charge of the kiln department. I cannot recall their names as they were hired and discharged by Mr. Mason.

XQ107. Who is Mr. Emil Herter whose handwriting you identified in answer to Q167?

A. He is a draftsman who has been in Mr. Edison's employ for nearly twenty years.

XQ108. Referring to the book of photographs that you had under consideration in connection with Q23, how many photographs are there in this book, and how many of them show the rotary kiln or models thereof?

MA. HICKS: If Defendant's Counsel wants to know how many photographs there are in that book he can count them. The book is at his disposal. Defendant's Counsel can cross examine the witness in regard to any of the photographs that are in evidence. The witness is advised he should not do such work unless directed so to do by the Court. The depositions of Dr. Kiefer and Professor Carpenter were prolonged by just such methods.

2040 MA. RICHMOND: See Q24.

A. I am advised by counsel not to count the photographs until directed so to do by the Court. XQ109. Do you decline to comply with the request in XQ108?

A. I am perfectly willing to do so if directed by my Counsel or the Court.

XQ110. You will understand that I must press my question until you either reply to it or decline to do so; I respectfully ask again if you will kindly make the count requested, or if you decline to do so?

A. I decline to make the count until otherwise directed by counsel. 2047

XQ111. Is it not a fact that there are 399 photographs in this book, not counting the two obscured ones at the first?

MA. HICKS: Complainant's Counsel will concede that there is any number of photographs in that book which may be mentioned by Defendant's Counsel.

MA. RICHMOND: This is perfectly satisfactory, and it is understood that Complainant's Counsel concedes the correctness of the statement in XQ111.

A. Having seen Defendant's Counsel make this count, I have no doubt but what it is correct. 2048

XQ112. All of these photographs which show the rotary kiln or models thereof are comprised among those heretofore offered in evidence, are they not?

A. Yes, that is my understanding.

XQ113. Toward the latter part of your answer to Q35, you referred to "the chemist who made the analysis and conducted the physical tests". Who was he?

A. As we had several chemists at that time engaged at work at Mr. Edison's laboratory, I do not remember which one made the analysis or the physical tests. 2049

XQ114. Please give us details about the cost of the kiln amounting to seventy-five to a hundred thousand dollars, that is, please give us some classification of this cost, and the exact period of time that was included?

A. The period of time would start from the time the wooden full size section was built up to and including the time the kiln was in com-



2850 merical operation at the New Village, N. J. plant, which I have already testified to as being about 1903. It covers all the experimental and testing work during that period.

XQ115. Does it include Mr. DeVoe's expenses in hunting for brick?

A. It probably does.

XQ116. And all the expense on coal injectors?

A. Yes.

XQ117. And for machinery and labor in grinding raw materials, clincher and coal during this period?

A. It probably does.

2851 XQ118. Does it include all expenses for operations at the laboratory that were connected with the projected plant at New Village?

A. No.

XQ119. Please state in outline what is your basis for your estimate of seventy-five to a hundred thousand dollars, and mention a few of the larger items of cost entering this estimate?

A. The cost includes the erection of the experimental kiln with the driving machinery, the preparations of the raw materials at the various tests, the work in connection with the model, wages of all experimenters, the costs of all materials used in connection with the tests, and as I recall a proportion of the general expense of the laboratory which is always added to the cost of Mr. Edison's experiments. In addition were the costs during the preliminary operating tests after the kiln was erected at New Village, N. J.

2852 XQ120. I realize that your seventy-five or one hundred thousand dollars estimate is only an estimate, but I wish you would, before this examination closes, produce an original record or records, showing the larger items of this expense, and if possible enough of these items to aggregate half

or two-thirds of your estimate so that we can get an approximate idea of how this expense was distributed. Will you kindly do so?

Mr. HICKS: Objected to as not proper cross examination. The witness has testified according to his own recollection and not from any books or memoranda. Defendant's Counsel can cross examine the witness to any extent concerning what the witness has stated from his own recollection. The course pursued by defendant's Counsel would result in the production of all the books and records of any person or company that defendant's Counsel might choose to mention, none of which have been in any way referred to on the direct examination. This is not proper cross examination and it is objected to.

A. I decline to do so until advised by counsel. XQ121. To whom and when was the first license under the patent in suit granted?

A. To the Edison Portland Cement Company. I don't remember the date.

XQ122. Please look at Complainants' Exhibit, Copy Edison-Edison Company License Agreement, August 31st, 1899, and say if this is a copy of the license just referred to?

Mr. HICKS: Objected to upon the ground that the exhibit speaks for itself, and that it is not for the witness to construe the same.

Mr. RICHMOND: He is not asked for a construction, but for an identification.

Mr. HICKS: There is no identification called for by the question. But the question in effect asks the witness to construe a

2050 written instrument, and the objection is repeated.

A. I think it is.

XQ123. Were any other licenses granted after this license and before the license to the Complainant, North American Portland Cement Company, and if so, to whom and when?

A. There were no other licenses granted, before that time.

XQ124. Are the half dozen companies, exclusive of the Edison Company which you named in your answer to Q44, the ones often referred to as the "Big Six"?

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A. Yes.

XQ125. The licenses to these six companies were granted through the North American Company, were they not?

A. Yes, but my recollection is that each individual license is between Mr. Edison and the individual company.

Mr. HICKS: The answer to XQ122 is objected to as speculative.

2058 XQ126. In connection with your answer to Q47, please tell us how many barrels of Portland cement were produced in the United States in each of the years 1910 and 1911?

A. According to the report of the Geological Survey in 1910 there was produced about 76,500,000 barrels, in 1911 about 78,000,000 barrels, the capacity, however, to produce during both of these years was probably from ninety to one hundred million barrels.

XQ127. I think you have mentioned yourself, and Messrs. Edison, Darling and Mason as having had a leading part in the development work culminating in the commercial operation of the plant at New Village. Were there any other per-

sons in the same class with yourselves associated with you in this work, and if so, please give their names? 2060

Mr. HICKS: The statement preceding the question is objected to as incorrect, except as to Mr. Edison.

A. As I have already stated Mr. William Simpkins was chief draftsman, located at Mr. Edison's laboratory at Orange, N. J. and Mr. Emil Herter were both active in this work. This covers the principal men.

XQ128. Please outline very briefly the previous experience of Mr. Simpkins and Mr. Herter?

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Mr. HICKS: Objected to as immaterial.

A. Mr. Simpkins was an engineer and draftsman of considerable experience and just before he came to Mr. Edison was employed as I recall by the Reading Iron Works at Reading, Pa. I do not remember his previous employers. Mr. Herter had been associated with Mr. Edison through the larger part of an iron ore concentrating work to which I have already referred, covering a period of six or seven years prior to the time the cement work was started.

2061 XQ129. Your letter of July 15th, 1902 refers to "our small rotary kiln". What was that?

A. That refers to a small kiln, as I recall, about four feet in diameter and approximately twenty feet long which we built to try and sinter iron ore.

XQ130. Has the Edison Portland Cement Company paid dividends on its capital stock, and if so, when was the first dividend?

Mr. HICKS: Objected to as not proper cross examination, and whatever the facts

2002 may be, of which complainants' Counsel has no knowledge, the witness is advised he should not answer such a question unless directed so to do by the Court. This question is in line with the preceding question calling for records in no way referred to on the direct examination.

A. I decline to answer the question until directed to do so by the Court.

XQ131. I now direct your attention XQ98, and ask you if you will kindly produce the records there inquired for?

2003 Mr. HICKS: Same objections.

A. I repeat the former answer that on advice of counsel I decline to produce any records unless directed to do so by the Court.

XQ132. Then do I understand that you decline to comply with the requests in XQs 98, 102, 104, 120, and 130?

A. Yes, unless so directed by Counsel or the order of the Court.

2004 Mr. RICHMOND: Counsel for Defendant respectfully, but emphatically protests against the refusal of the witness to assist in giving the Court the information inquired for in the cross questions enumerated in XQ132, and also protests against the advice given by Counsel for Complainants to the witness in connection with these cross questions.

Mr. HICKS: Complainants' Counsel is perfectly willing that the witness should produce any record and should answer any question that is a proper question, or that the Court may direct the witness to produce or to answer. The witness has not, however, testified on his direct examination in reference to any of the records called for

or with reference to any of the matters touched upon in the questions which the witness has refused to answer unless directed so to do by the Court. It is not thought that Defendant's Counsel should have entered upon any of these matters.

Mr. RICHMOND: Counsel for Defendant believes the cross questions enumerated in XQ132 were proper and should have been answered. As to this, the record shows what it shows, and Counsel for Defendant will not, at this time, attempt to state what it shows.

CROSS EXAMINATION CLOSED.

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RE-DIRECT EXAMINATION BY MR. HICKS:

RDQ133. If any of the records which Defendant's Counsel has asked you to produce, and which you have declined to produce unless instructed so to do by the Court, are in existence, are any of them here in the City of New York?

A. No.

RDQ134. Referring to Q39 in answer to which you said that the Edison Portland Cement Company was incorporated on June 3, 1899, did you have personal knowledge of the incorporation and organization of that company?

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A. I did.

RDQ135. In answer to XQ67 you agreed that the laboratory kiln which you had described in the letter as being "so radically different from the existing kilns in general use" comprised certain features mentioned in the question. Please state whether that laboratory kiln comprised in addition to the features mentioned in that question a rotary part 100 feet in length and a brick extension, being masonry, and say what there was to show chamber fifty feet in length?

890 Deposition of Walter S. Mallory.

2068 MR. RICHMOND: Objected to as leading.  
MR. HICKS: XQ67 is so very well framed  
that the preceding question is thought  
proper.

A. Yes.

RDQ136. Referring to your answer to Q2, and  
especially to that part thereof where you speak  
of your reports to Mr. Edison with regard to the  
first output of the New Village kilns and of what  
he said, and of what was thereafter attempted,  
and of what was the result of the many trials  
made, did you testify in regard to these matters  
from your present recollection, or from reference  
to any record or records produced by you?

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A. From my present recollection.

RE-DIRECT EXAMINATION CLOSED.

DESCRIPTION CLOSED.

WALTER S. MALLORY.

Adjourned to October 18th, 1912, at 11:00 A. M.

New York, October 18th, 1912.

Met pursuant to adjournment.

2070 Present: Parties as before.

WALTER S. MALLORY, recalled for further  
re-direct examination, testified as follows:

RDQ137. Have you refreshed your recollection  
since the close of the session yesterday afternoon  
so that you can give definitely the capacity shown  
by actual outputs of the Edison 150 foot kilns  
during the years 1903, 1904, and 1905?

MR. RICHMOND: Objected to. If it is  
the desire of Counsel to recede from the  
position taken when he advised this Wit-

Deposition of Walter S. Mallory. 891

ness not to respond to cross questions along  
this line, then he should state his change  
of position and tender the witness for  
further cross examination.

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MR. HICKS: Complainant's Counsel at no  
time advised the witness not to respond to  
cross questions along this line. The state-  
ment of Defendant's Counsel in this respect  
is entirely incorrect. On the contrary Com-  
plainant's Counsel stated that the witness  
had testified from his own recollection and  
that it was open to Defendant's Counsel to  
cross examine the witness to any extent

with regard to the statements made by the  
witness from the recollection of the wit-  
ness. The witness not having been exam-  
ined with reference to the books or rec-  
ords called for by Defendant's Counsel,  
and the witness not having used such books  
or records, Complainant's Counsel ad-  
vised the witness that he should not pro-  
duce the books or records called for un-  
less directed so to do by the Court. The  
position of Complainant's Counsel is that  
Complainants are entitled to a ruling of  
the Court upon an attempt to make a  
fishing expedition into the books and rec-  
ords of the company that is not a party  
to this suit, and the books and records of  
which have not in any way been referred  
to by the witness. In the objection to  
XQ120 Complainant's Counsel said "The  
Defendant's Counsel can cross examine the  
witness to any extent concerning what the  
witness has stated from his own recollection.  
The course pursued by defendant's Counsel  
would result in the production of all the  
books and records of any person or

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2074 company that Defendant's Counsel might chose to mention, none of which have been in any way referred to on the direct examination."

Mr. RICHMOND: Believing that the record shows the situation, Defendant's Counsel will not enter upon a labored attempt to explain or repeat what it shows. As to the offensive imputations in the foregoing remarks, Counsel for Defendant is unable to compete.

2075 Mr. HICKS: Complainant's Counsel desires to add that there may be several competent ways of proving a fact; one of them is by the testimony of a witness having knowledge of the fact; another is by the production of records proved by a witness having knowledge of the facts and of the correctness of the records. Complainant's Counsel is able to prove the facts in the first manner, and has made no attempt to prove the facts in the second manner.

A. I have.

RDQ138. Please state then the capacity shown by actual outputs of the Edison 150 foot kilns during the years 1903, 1904, and 1905.

2076 A. On December 1st, 1903 kiln No. 2 produced 768 barrels of clinker. On August 31st, 1904, kiln No. 3 produced 792 barrels of clinker and on October 4th, 1905, kiln No. 1 produced 1129 barrels of clinker.

RDQ139. Have you refreshed your recollection, and can you state any more definitely the cost of the experiments, constructions, and so forth leading up to and including the installation of the 150 foot Edison kiln No. 1 at New Village?

Mr. RICHMOND: Same objection.

Mr. HICKS: Same reply.

A. I have. The total amount expended for experiments and plans was about \$100,000 of which \$135,000 was expended up to 1904, so I believe that my estimate of seventy-five to one hundred thousand dollars is conservative for the reason that the other mechanical devices used in the cement plant were largely developed during the period of the concentrating work to which I have already referred.

Re-DIRECT EXAMINATION CLOSED.

Re-CROSS EXAMINATION BY MR. RICHMOND:

RXQ140. By what means did you refresh your recollection? 2078

A. By conversing with one of our men, by telephone.

RXQ141. Who?

A. Mr. A. H. Moses.

RXQ142. Please explain how he is in a position to know these matters?

A. He obtained the information from our records.

RXQ143. Was this the only means by which you refreshed your recollection on the matters of your examination this morning? 2079

A. Yes.

RXQ144. Who is Mr. Moses, what is his position in relation to your company?

Mr. HICKS: Objected to as immaterial and not proper cross examination. The witness has testified as to all these matters from his own recollection and anything that Mr. Moses may be can have no bearing whatsoever upon the testimony of the witness given from his recollection.

2080 A. He is one of the men in our accounting department.

MR. RICHMOND: In view of the foregoing cross examination, the questions and answers 137 to 139 inclusive are objected to as secondary and incompetent.

RE-CROSS EXAMINATION CLOSED.

RE-DIRECT EXAMINATION BY MR. HIGGS:

RDQ145. Please state whether your answers to RDQs 138 and 139 are based upon your present  
2081 recollection?

MR. RICHMOND: Objected to as leading.

A. Yes.

RE-DIRECT EXAMINATION CLOSED.

DEPOSITION CLOSED.

WALTER S. MALLORY.

EMIL HERTER, a witness being duly sworn on behalf of the complainants, testifies as follows:

DIRECT EXAMINATION BY MR. FICKS:

Q1. Please state your name, age, residence and occupation?

A. Emil Herter, age, 52; residence, Orange, N. J., occupation, mechanical Engineer.

Q2. Have you been in the employ of Mr. Thomas A. Edison; and if so, how long?

A. Since 1888, about twenty-four years.

Q3. Please state fully, and in your own way, what connection, if any, you had with regard to Mr. Edison's work resulting in the Edison 150 foot kiln No. 1 that was eventually installed in the New Village plant?

A. In January 1899 Mr. Edison gave me some sketches of a kiln that he wanted me to lay out for him. I made paper drawings of this kiln ac-

ording to his sketches and his ideas, as he would come in my room probably four or five times during the day and we would talk over the matter about the kiln, and what was the best way to make the kiln according to his sketches. Also, some time in March, 1899 I made a drawing of a section of a kiln which was 8 feet outside diameter, 10 feet long, showing corrugated fire brick on the inside having a diameter of about six feet. I also had charge of making a life size model of this section. This section was mounted on four wooden wheels which were four feet in diameter and on an incline. This was made so that we could revolve the same and see what was the rate of progression of the crushed stone which we tried—how much it would advance a revolution in a horizontal line. The idea of the corrugated bricks was to carry the material further up on its side than if the cylinder had been plain or smooth on the inside. We also, after trying the crushed stone that we had, bought clinker, as our stone, having sharp corners, seemed to hang to the side of the cylinder on the inside, and would not roll or travel as far as we afterwards found out with the burned clinker that was bought from the Lehigh Portland Cement Company. This clinker, to the best of my recollection, was bought in June, 1899. After had tested this full size section we then made some more drawings changing the inclination of the cylinder, also changing the wheels, changing the corrugated brick on the inside which were made out of wood, to see what were the best results that could be obtained. After this section had been tested in this manner, off and on for about two months or so, I then started on another kiln model section in which we had bricks, the corrugations of which were staggered. In the

2704 first model section the corrugations ran the whole length of the ten feet. In the second section the corrugations would run about twelve inches, then the other one would come in twelve inches long, then the third row of corrugations would line up with the corrugations in the first row, in the fourth row the corrugation would line up with the second row and so on throughout the section which was ten feet long. This model section did not prove as good as the first one. The crushed stone and also the cinder which was tried would not as readily travel forward as in the first section. That was all the experiments that were made with these sections. Afterwards, in June I started to lay out a general plan of the present Edison Portland Cement Company's plant at New Village, making drawings of the buildings, necessary machinery, including rolls, drivers, conveyers, grinding rolls, blowing apparatus, conveyers of different types, as bulk conveyers, scraper conveyers, flight conveyers, elevators, and so forth; also drawings for the kilns, kiln houses, stock houses, engine houses and boiler houses. The kiln, the 100 foot kiln drawings which I started in January of 1899 were revised, and with the data that was deducted from these experiments new drawings for the 100 foot kiln rotating part, and the fifty foot stationary part were then made. From these drawings we built a model, two inches to the foot, of the plant as it would be erected at New Village. This model was started some time after the 1st of July 1899. This model was built of wood in a building erected purposely for this purpose. The model consisted of giant rolls, 36 inch rolls, grinding rolls, blowing apparatus and conveyers, also the necessary line shafting, feeding foundations, pulleys, and so forth. A model

for the kiln was completed about the latter part of October 1899. Under direction from Mr. Malloy, I had taken, from time to time, photographs of the model as completed, also dating them as I took them. The kiln proper which was erected at the laboratory of Thomas A. Edison at West Orange, N. J.,—these drawings for the different sections thereof were about completed at the same time that we had our model finished, and the sections were ordered from the Wheeler Engineering Company, Carteret, N. J. and were received at the laboratory some time in February, 1900. We had, in the meantime, prepared the foundation to erect this roaster on it, which was done by Mr. Drexelmeier & Son of Orange, N. J. some time after February 1900. To the best of my recollection, the kiln sections were about all on their friction wheels or bearings by April of 1900. The other necessary machinery, including gears, bearings, and stands for driving or rotating the roaster, were not received until some two months later. The stationary part of the kiln which was of brick and contained paddles for moving forward the raw material or chalk, as we called it, was not completed until about May of 1901. I recall some trouble that we had in trying to rotate the revolving part of the kiln, that was 100 feet long and consisted of nine sections, ten feet long, and two sections fifty feet long. But in not having the friction wheels in perfect line with the axis of the cylindrical shell, the cylinder or roaster as we called it tried and did walk up hill, or in other words, the discharge end being some four feet lower than the feeding end, it tried to walk up hill, away from the thrust wheel which was put in at about half its length to keep the kiln from going down hill when rotating. This alignment of the friction

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2710 wheels not all being in the same line was what caused the kiln to walk up hill. The kiln was fired up or started some time in the latter part of June 1901, and, on account of our coal burner, we had a lot of trouble to heat the kiln up properly, our coal gun which we had designed not working properly, and not being able to control its movements caused us a lot of trouble, not being able to get the proper heat to produce clinker that would make good cement. We did produce some good clinker some time in July 1901. We also experienced a lot of trouble with the stationary part of the kiln in which were contained the paddles for feeding in the raw material or chalk to the revolving kiln. These paddles would stick, break off, due to the heat, the shafts would freeze fast to the bearings on account of the high heat, causing us to shut down, make changes, repair them, and start up again to see if the kiln, as it was, would make good clinker. We also had trouble with one of the sections cracking longitudinally from the heat, due to a flaw that we found was in this casting. This kiln was finally taken down, after the experiments which Mr. Edison had conducted, some time in October, 1901 and then shipped up to the Edison Portland Cement Company's plant at New Village, N. J. To the best of my recollection, from the trouble that we had with the stationary part of the 150 foot kiln as erected at the laboratory of Thomas A. Edison at West Orange, N. J., Mr. Edison decided to make the kiln of fourteen sections, ten feet long, and two sections five feet long, making a total length of 150 feet for the revolving or rotary kiln, and it was so erected at the cement plant, the necessary extra five sections were added, and also the cracked section was replaced by a new one. Mr.

Edison's idea, of making the kiln of cast iron sections as against steel of the present kiln then in use, was that it was a better manufacturing proposition, as against a kiln made of steel sixty feet long as then in present use in 1890. The idea of the numerous number of friction wheels, supporting the kiln, was to reduce the bearing pressures on the shafts of the friction wheels, as against a kiln sixty feet long having only two points of support, in which Mr. Edison from his knowledge was quite right. This accounts for the Edison kiln and his original sketch, or sketches showing the kiln made of sections. In July 1899 Mr. Darling, who was then a mechanical engineer, for the Columbia University at New York City, was employed as chief engineer and was chief engineer and superintendent of the plant at New Village until the time of his death in March, 1903, which was caused through the coal explosion that occurred at the plant March 2nd, 1903. The 100 foot kiln, with its additional sections, was erected at the New Village plant, and also No. 2 kiln, some time before October of 1902. I remember well receiving a telegram from Mr. Darling to come to the cement plant at once. This was in about the middle of August 1902. When I arrived at the cement plant they had just about started the crusher plant in operation in order to test it out and see if it was up to Mr. Edison's expectations, as he was at the plant looking after the starting up of the machinery to see that everything worked in proper order. From the crushing plant the material was taken to the stock house so that we could make the proper chalk for testing the roaster which had not yet at that time been started up. No. 1 roaster was started up for its first test at the cement plant about the middle of October 1902.

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2716 I well recall this first test made of the roaster at the Plant at New Village. We started the roaster Monday morning and continued the run until Tuesday morning, working in our clothes just as we came from Orange, and we looked like a set of niggers when we got through with this first experiment. The roaster and the burner that they had, also the coal grates, gave no end of trouble when the test was first made at New Village, being entirely different from the test at Orange which was made in July 1901, which was no doubt due to the added length of the kilns of the extra fifty feet.

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BY AGREEMENT of Counsel the deposition of Mr. Herter is suspended to take the deposition of Mr. Miner.

EMIL HERTER, resumes the stand for further direct examination.

Q4. In your answer to Q2 you said that in January 1899 Mr. Edison gave you some sketches of a kiln that he wanted you to lay out for him. Have you those sketches here?

A. Yes sir.

2718 Q5. Are these the sketches that you refer to?

A. Yes sir.

Q6. How many sketches are there?

Mr. RICHMOND: This question and this line of questions are objected to as calling for secondary and incompetent testimony.

A. There are nine sketches.

Q7. Who has produced these nine sketches?

A. I have.

Q8. Please review these nine sketches and state, if you know, in whose drawing and handwriting the sketches are and what they respectively show,

referring to the sketches as numbers 1 to 9 in the order in which they now are?

A. Sketch No. 1 shows a hand sketch by Mr. Edison of two kilns sixty feet in length, making a total length of approximately 120 feet. The lower half of the sketch is marked "60, lined with shaped brick 6 thick." The upper half lined with single fire brick, the diameter outside 7 feet, five sections are in Mr. Edison's handwriting. Flange  $2\frac{1}{2}$  inches thick, 5 inches, also 3 feet, 20 feet, stack five feet inside of lining are in my handwriting. The figures in my handwriting were made in January of 1899 and, no doubt the same time that Mr. Edison gave me these sketches and explained to me what he wanted.

Sketch No. 2 shows a kiln 120 feet and apparently the 30 foot stationary section, also a cross section of a thirty foot section, which are in Mr. Edison's handwriting. The lower sketch in the left hand corner shows a sketch for a cooler, 25 feet long, 30 inches inside diameter,  $4\frac{1}{2}$  inches of fire brick and the discharge end of the roaster.

No. 3 shows a sketch of a discharge end showing how the clinker would come out of the bottom, also the part of the coal feeding apparatus.

No. 4 shows the side view of the upper end or feeding end of the raw material, showing a screw in the brick chamber, showing a cross section, showing the side of this chamber inclined down to the screw, showing also a pulley on the end of the screw and a hopper or box for feeding in or supplying the raw material.

No. 5 shows a sketch in Mr. Edison's handwriting 30 feet scratched out, changed to about 25 feet, another section 25 feet, another section 50 feet in Mr. Herter's handwriting, the first section has 12 wrote into it intended to mean twelve inch

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2732 fire brick. The second section 25 feet, 6 inch fire brick, the third section 4½ inch fire brick. This sketch was changed from Mr. Edison's original sketch, the first 30 foot section changed to 25 feet, the second section 25 feet, third section 50 feet are in Mr. Heter's handwriting, and is marked, changed 120 feet long, 3-21-99. The change was made March 21st 1899 by Mr. Edison's directions and these changes in the figures are in my handwriting.

Q9. On this sketch No. 5 appears this notation, "change—130 ft. long. 3-21-99". In whose handwriting is this notation, and on what date was it made?

3733 A. This is in my handwriting and was made on March 21st, 1899.

Q10. Please continue your description of the sketches.

A. The lower sketch shows a roaster represented by a line and is marked 5 on the left hand end, and above the line, 1, 2, 3, 5, 6, 7, 8, 9, and below the line, 10, 10, 10, 10, 10, four spaces without any figures, the last space 6. These figures 5, five 10s, four blank spaces, and 6, on the right hand end, were intended to represent a kiln 100 feet in length.

2734 I would say the lower sketch on sheet 5 just described above is in my handwriting.

Sketch No. 6 is in Mr. Edison's handwriting, showing a cross section of kiln, two bearing or friction wheels, showing a large gear, small pinion, showing a plan view of kiln showing one section with thrust ring, thrust wheel, plan of sketch showing a gear, two bearings, a pair of beveled gears and a clutch.

Sketch No. 7, which is in Mr. Edison's handwriting, shows the feeding end of a kiln for the raw material, also shows the brick stack, shows a stack 24 inches, stack red brick lined or cheap fire brick

up 15 feet, water tubes to heat water for boiler are shown in this brick section; holes for removing dust are shown. 2735

Sketch No. 8 shows the discharge-end of roaster or kiln, showing cooler or chute, showing by shaded lines clinker partly filling the chute up, showing by arrows intended for air to be drawn up through the chute and feeding or blowing air into the cool apparatus. This sketch is in Mr. Edison's handwriting.

Sketch No. 9 shows one of the half sections at the feeding end of the kiln, shows the brick chamber with its screw conveyor with a pulley on the end of the screw for revolving the same, shows a stack, also shows a cross section showing the screw in the bottom of the brick chamber with the stack on top, and two lines to represent the sides inclined towards the screw. This sketch is also in Mr. Edison's handwriting. 2736

Q11. In your answer to Q2 you spoke of clinker that was bought in June 1899. Do you recollect from what company that clinker was bought?

A. Lehigh Portland Cement Company.

Q12. Do you recollect any occurrence between you and Mr. Edison with reference to that clinker?

2737 A. Yes sir. We had a pair of grinding rolls, and in trying to grind the clinker it flaked, that is, in other words, it would not pulverize fine. The outside of the clinker being apparently black, and the inside, when broken open with a hammer, had a yellow appearance, which showed that the clinker was not properly burned so that it could be pulverized to a fine powder in the grinding rolls that we had used for other experiments.

Q13. What, if anything, did Mr. Edison say to you on this occasion?

A. He asked me to crack three or four of the pieces with a hammer and they all showed this

2728 yellow center. He said right away that that clicker was underburned.

Q14. I show you the four blueprint photographs dated September 16th, 28, and October 7, October 7, 1899 and the first three photographs dated April 1, 1900, all seven of which have been offered in evidence, and are contained in the book of photographs of the Edison Portland Cement Company. Please state what you know about these photographs?

A. The blueprint photograph dated September 16, 1899 shows two models of the two 100 foot kilns with the 50 foot brick extension, erected in the model house at the laboratory of Thomas A. Edison, West Orange, N. J. It also shows the discharge end in front of one of the models, shows the cooler at one end resting on a wooden horse, shows the discharge end of the other model setting on the floor, shows a small pair of rolls. The photograph dated September 28, 1899 shows the model of the two roasters, the two discharge ends, the two brick chambers at the feeding end, also the stack, shows the roaster sections of the model, shows the friction wheels for the roaster, shows the friction wheels for the cooler, also shows the outline of the trusses of the roaster building, shows a small pair of rolls.

2730 The first photograph October 7th, 1899 shows the model of the roaster, shows the feeding end for the raw material, shows the stack, shows the model of the building.

The second photograph October 7th, 1899 shows the feeding end of the roaster model, showing the 50 foot brick chamber, and showing the feeding mechanism for bringing the raw material through the roaster model. This model shown by blueprint photographs September 10th, September 28, October 5th, October 7th, and October 7th was

made on a scale of two inches to the foot, and was erected under my directions. These four blueprint photographs were taken by myself at the direction of Mr. Mallory. These dates September 16, show the stage of how far the work on the model had progressed, also September 28th, October 7th and October 7th show how far the work had progressed. These photographs were taken September 16th, September 28th, October 7th and October 7th, 1899 by myself, with my own camera.

Q15. Are the dates marked on these blueprint photographs reproductions of the dates marked on the negatives or are they dates which were marked on the blueprints?

A. They are from dates marked on the negatives as soon as they were dry, and the date as given on each shows the day when they were taken.

Q16. Now please describe the first three photographs marked April 1st, 1900, and state when those photographs were taken?

A. The photograph on the top of the page shows the roaster or the experimental roaster kiln in the yard of the laboratory of Thomas A. Edison, Orange, N. J. and shows that the kiln is all up with the exceptions of the last section at the discharge end. This photograph was also taken with my camera on April 1st, 1900. The photograph on the lower half of the page shows more of a side view of the kiln, showing the kiln without the last section attached to it, shows the supporting wheels, and also shows brackets, bearings, shows the 50 foot brick extension at the upper or feeding end, and was also taken with my camera.

The third photograph shown on the upper half of the next page shows the upper end of the kiln 50 feet in length, shows the bearings for the pulleys to feed the raw material in the stationary

2734 part, and the rotating part of the 100 foot kiln. This photograph, as well as the other two, and all marked April 1st, was taken with my camera by a Mr. Damon as I was sick at the time this work had progressed so far.

Q17. In your last answer you say that the first photograph of April 1st, 1900 "shows that the kiln is all up with the exception of the last section at the discharge end". I assume that you mean only the rotary or 100 foot part of the kiln. Is that correct?

A. Yes sir.

Q18. Do the photographs of April 1st, 1900 show any lining, or burning apparatus, or stack?

A. No sir.

Q19. Do you recollect overhearing any conversation at Easton, Pa., in 1902 about the Edison long kiln; and if so, state what place it was and what was said?

Mr. RICHMOND: Objected to as secondary and incompetent.

Mr. HEROS: The question calls for direct testimony concerning statements made at the time and place inquired about, tending to show the opinion entertained at the time.

2730 A. In August 1902 when I went to the cement plant at New Village from Orange, Mr. Darling, chief engineer and superintendent of the plant of the Edison Portland Cement Company at New Village, sent me to Easton, Pa., to the United States Hotel for my lodgings or board, as the house at New Village was not large enough to accommodate another person for sleeping over night, and being at the hotel in the evening and also at the supper table I heard some of the men sitting around me talking about the foolish move the

Edison Portland Cement Company were making in putting in rotary kilns 100 feet in length, and made of cast iron sections. These conversations of these men were almost made nightly at the supper table, and also after supper outside in front of the hotel I heard for about ten weeks the remarks as they put them, and they laughing over them seemed to enjoy them very much, not knowing that one amongst their midst was from the Edison plant. I enjoyed these remarks and sat there, as my experience and my relations with Mr. Thomas A. Edison in the last twenty-four years have proved that he is a pretty good guesser when he undertakes to outline some new invention of his, and the kilns in question have no doubt more than proved the correctness of his ideas.

Q20. From the conversations of these men did they seem to be men engaged at that time in the cement business?

Mr. RICHMOND: Same objection and also objected to as leading and conjectural.

A. Yes sir.

Adjourned to October 19th, at 10:30 A. M.

New York, October 19th, 1912. 2730

Met pursuant to adjournment.

Present: Parties as before.

EMIL HERTER, resumes the stand.

DIRECT EXAMINATION CONTINUED BY MR. HEROS:

Q21. From your previous answer I understand that all of sketch No. 1 and the writing thereof were made by Mr. Edison except that you wrote thereon the following words "flange 2 1/4 inches

2740 thick 5 inches", and along side of the stack the words "25"—0; 20"—0; stack—5"—0, inside of lining". Is this correct?

Mr. RICHMOND: Objected to as leading, or useless repetition.

Mr. HICKS: The witness has already described these sketches in his own way. For the convenience of the Court, these questions are now put in order that the notations made by the witness may be briefly and clearly differentiated from the drawings and writings made by Mr. Edison.

2741 A. Yes sir.  
Q22. On sketch No. 2 I understand that all was made by Mr. Edison except that in the lower left hand corner there is a sketch of a cooler with figures "4½"—30"; 4½; 25"—0" thereon made by you and except that in the upper left hand corner there is a triangle bearing the figures "½" and "12" and to the right of the triangle the figures "½ = 1 ft." made by you. Is this correct?

A. Yes sir.

Mr. RICHMOND: Same objection and also objected to on the ground that this is not the best evidence, but that Mr. Edison himself should testify in regard to these matters.

2742 Mr. HICKS: If Defendant's Counsel desires the testimony of Mr. Edison, who, as is well known is quite deaf, why didn't defendant's Counsel call him as a witness?

Mr. RICHMOND: Because Complainant's Rebuttal testimony was not known to defendant's counsel when defendant's reply testimony was being taken.

Mr. HICKS: Complainant's Counsel regards the objection made as utterly absurd.

Q23. Referring to sketch No. 3 I understand that sketch No. 3 was all made by Mr. Edison. Is this correct? 2743

Mr. RICHMOND: Same objections.

Mr. HICKS: Complainant's Counsel understands that the objections made by defendant's Counsel to these questions in regard to these nine sketches are to be understood as being made to each question put.

A. Yes sir.

Q24. With regard to sketch No. 4 I understand that sketch No. 3 was all made by Mr. Edison. Is this correct? 2744

Mr. RICHMOND: Same objections.

A. Yes sir.

Q25. With regard to sketch No. 5 I understand that the sketch and the writing thereon were all made by Mr. Edison except that the following notation "25" about; 25"—0; 50"—0"; change—130 ft. long. —3—21—99" and all below these quoted figures were made by you. Is this correct?

Mr. RICHMOND: Same objections.

A. Yes sir.

Q26. Referring to sketches Nos. 6, 7, 8 and 9, I understand that the sketches Nos. 6, 7, 8 and 9 and the writings thereon were all made by Mr. Edison. Is this correct? 2745

Mr. RICHMOND: Same objections.

A. Yes sir.

Q27. Please state the circumstances by reason of which you made your marks or notations upon such of these nine sketches as bear any marks or notations made by you?

A. These notations made on these sketches were put on there so that I would remember, when Mr.

2746 Edison explained the sketches to me, what he had in his mind.

Mr. HICKS: Sketch No. 1, having been offered in evidence after the answer to Q16 in the deposition of Mr. Mallory, the remaining eight sketches are offered in evidence and marked as follows:—

Complainants' Exhibit, Edison Sketch No. 2, January, 1899;

Complainants' Exhibit, Edison Sketch No. 3, January 1899;

Complainants' Exhibit, Edison Sketch No. 4, January 1899;

2747 Complainants' Exhibit, Edison Sketch No. 5, January 1899;

Complainants' Exhibit, Edison Sketch No. 6, January 1899;

Complainants' Exhibit, Edison Sketch No. 7, January 1899;

Complainants' Exhibit, Edison Sketch No. 8, January 1899;

Complainants' Exhibit, Edison Sketch No. 9, January 1899.

2748 Mr. RICHMOND: These sketches are objected to as not properly proved and as not constituting the best evidence. It might be that if Mr. Edison, who is alleged to have had a large share in making the sketches, were here, he could answer questions about their significance, and could explain his ideas which these sketches are supposed to illustrate.

Mr. HICKS: The objection that the sketches are not properly proved is meaningless since the witness has testified that the sketches are in the drawing and handwriting of Mr. Edison, with the few exceptions noted, and were delivered by Mr. Edi-

son to the witness in January, 1899 accompanied by explanations made by Mr. Edison to the witness. As Complainants' Counsel understands the objection it amounts merely to this;—That the sketches have been proved by one competent witness instead of being proved by some other witness.

Q28. In your answer to Q3 you said "We started the roaster Monday morning and continued the run until Tuesday morning, working in our clothes just as we came from Orange, and we looked like a set of niggers when we got through with the first experiment". Whom do you refer to by "we" in the passage quoted?

A. Mr. Edison, Mr. Darling, Mr. Mason, and the burner and myself.

Q29. Where did you find the nine sketches by Mr. Edison to which we have been referring, and before you produced them at this examination?

A. I found them at the laboratory of Mr. Edison in a box of negatives, being in between each negative to preserve the negatives from being scratched.

Q30. What negatives were those?

A. The negatives of the photographs of the blue-prints of the model of the roaster. The negatives were dated September 16th, 1899, September 28th, October 5th, October 7th and October 7th, 1899.

#### DIRECT EXAMINATION CLOSED.

#### CROSS EXAMINATION BY MR. RICHMOND:

XQ31. Were you a mechanical engineer for the Edison Portland Cement Company?

A. Yes sir.

2752 QX32. You state in your answer to Q3 that in January 1899 Mr. Edison gave you some sketches. How do you fix this date?

A. The New Jersey and Pennsylvania Concentrating Works at Edison, N. J. closing down in the fore part of December of 1898, I was told to report to Orange at the laboratory of Mr. Edison for further work. The month of December, when I came to the laboratory, I finished up some drawings for some changes that were made on a small pair of rolls that we had at the laboratory that were used for crushing stone, and that took me probably all of December as I had to make both my drawings and tracings having no one else to help me at the time, and I am quite positive that these sketches were handed to me by Mr. Edison in the fore part of January of 1899.

QX33. Did he make the sketches in your presence?

A. No sir.

QX34. What was the date when you began to lay out a general plan of the present Edison Portland Cement Company's plant at New Village?

A. Some time in July of 1899.

QX35. I understand that you had the kiln sections about all on their friction wheels or bearings at the laboratory by April 1900, but that the kiln was not fired up or started until some time in the latter part of June, 1901; what was the cause of this long delay?

A. In order to get all the material, and especially the fire brick which was special fire brick, none of the manufacturers of fire brick were willing to accept the order, for these corrugated brick was largely the cause of the roaster not being able to be fired up before about June 1901, also the coal gun we were making for the roaster, we had to design and make, took us quite some time before it would work, and when we did try it in June it

laid down and would not work. In trying to run it for ten hours, being different from a test, where we only tried it for about an hour before, and making a brand new kiln lined with fire brick twelve inches thick was almost impossible to get up a bent by having the coal gun lay down and refuse to work about every hour or so. This caused considerable delays.

QX36. Did you know anything about any of the flanges of the cast iron kiln sections breaking there at the laboratory?

A. No, sir, not at the laboratory. The kiln flanges did not start to break on roasters 1 and 2 until after 1903. I might state that the kiln flanges as now built, on roasters 1 and 2, and all other roasters at the Edison Portland Cement Plant are lined with a steel shoe, or tire.

QX37. Speaking of your first experiment at New Village you said "The roaster and the burner that they had, also the coal guns, gave no end of trouble \* \* \*" just what did you refer to by the word "burner"?

A. The operator operating coal guns or burner.

QX38. You mean the man, do you?

A. Yes sir.

QX39. Was he incompetent?

A. The kiln at New Village being 150 feet long 2753 was a different proposition from a kiln as used through the cement region at that time which was only from 40 to 60 feet long.

QX40. I don't think you have quite answered the question; was he incompetent?

Mr. HENES: Objected to as calling for a conclusion, and the opinion of the witness.

A. I have no doubt that he was the best man that Mr. Darling, chief engineer and superintendent of the plant, could procure as a cement burner to run the kiln.



2758 XQ41. But was he incompetent?

Mr. HIGGS: Same objection. Incompetent means nothing. Incompetent for what?

A. While he may have been able to successfully operate a 40 or 60 foot kiln, he could not, at the first experiment of the roaster at New Village, operate successfully the 150 foot kiln.

XQ42. What were the names and addresses of the men whom you heard talking at Easton for about ten weeks?

A. That I do not know.

2759 XQ43. What was the name of that burner that you mentioned in answer to Q28?

A. That I cannot remember.

XQ44. When was it that you found the nine sketches in the box of negatives?

A. I think in about the middle of May 1912.

XQ45. Please state the circumstances briefly, and whether you were making a search for them or for something else?

A. I was making a search for all drawings that I could find that related to the No. 1 roaster as erected at the laboratory of Mr. Edison in 1900, and 1901.

2760 XQ46. What is your present relation to the Edison Portland Cement Company?

A. I am connected at present with the Edison Portland Cement Company.

XQ47. By what means did you fix the dates of the negatives that you stated in Q30?

A. By the dates that were scratched into the negatives.

XQ48. But when you were answering Q30 didn't you get the dates from the exhibit photographs and perhaps one other, and read them off in making your answer?

A. Yes, I did.

XQ49. Does Sketch No. 1 show water tubes at the base of the stack? 2761

A. Yes sir.

XQ50. Can you tell from this sketch whether the two 60 foot kilns were intended to be of cast iron?

A. That was explained to me by Mr. Edison when he handed me these sketches, that they were to be of cast iron.

XQ51. Does Sketch No. 2 show a worm or screw conveyor to advance the cement material in the stationary 30 foot section?

A. It does.

RECESS.

2762

(AFTER RECESS)

Mr. RICHMOND: Counsel for Defendant directs the attention of Counsel for Complainants to XQ31 of Mr. Bentley's deposition, and the answer thereto.

Counsel for Defendant offers in evidence computation outlines in accordance with the remarks of Counsel following XQ369 of the Kiefer Rebuttal deposition, and asks that they be designated "Defendant's Exhibit Kiefer Cross Examination Computations."

Mr. HIGGS: This exhibit and all other exhibits offered in evidence by Defendant during Complainants' rebuttal testimony are, each separately objected to on the ground that Defendant's case was closed before complainants began their rebuttal testimony; also upon the ground that the present exhibit is incompetent as evidence, being without any support except the ideas of Counsel for Defendant, and those ideas he should set forth in his brief. 2763

2764 XQ52. Does Sketch No. 3 show holes through the sides of the kiln near its lower end for the clinker to drop through?

A. Yes sir.

XQ53 Referring to sketch No. 6, what are the three approximately rectangular outlines at the lower right hand portion of the sheet?

A. I should say from my present recollection, they would represent three kilns.

XQ54. Do you know what was the idea in representing these three kilns side by side on this sheet?

2765 A. Yes, the idea was to have one line shaft operating, with beveled gears and clutches, a number of kilns as was then the practice in the cement plants in the Lehigh region.

XQ55. You spoke of making a search, I understand about the middle of May, 1912 for all drawings that you could find that related to the No. 1 roaster as erected at the laboratory of Mr. Edison in 1900 and 1901. Have all the drawings that you found for that search been offered in evidence or produced in this case?

2766 A. Yes sir. I might add all working drawings that were at the laboratory relating to the cement plant and model roaster were burned up some time in 1910, as Mr. Edison wanted the room where they were stored in for other experimental purposes.

XQ56. Are these nine sketches all the sketches that you found pertaining in any way to the same subject matter, when you made your search in or about May 1912?

A. Yes sir.

XQ57. Do you mean that in 1910, by Mr. Edison's direction, all working drawings at the laboratory, relating to the laboratory kiln or the models thereof, were burned?

A. Yes sir, and all other drawings that belonged to the New Jersey & Pennsylvania Concentrating Works. 2767

Mr. HICKS: The question and answer objected to in that it does not appear that any working drawings relating to the laboratory kiln or the models thereof were at the laboratory when the burning took place in 1910. Mr. Mason's drawing dated November 23rd, 1899 for the 100 foot rotary part of the laboratory kiln is in evidence.

Mr. RICHMOND: Defendant's Counsel relies on the second part of the answer to XQ55, as between this and the statement of Complainants' Counsel. 2768

Mr. HICKS: If Defendant's Counsel thinks the point at all material, he can make it clear now, and should do so.

Mr. RICHMOND: Inasmuch as it seems clear, Defendant's Counsel will not unduly prolong this record.

CROSS EXAMINATION CLOSED.

RE-DIRECT EXAMINATION BY MR. HICKS:

RDQ58. Referring to your answer to XQ55, were you at the laboratory in 1910 at the time that the burning of things referred to by you took place, I mean were you present at any such burning? 2769

A. No sir.

RDQ59. Did you examine the things that were burned?

A. No sir.

RDQ60. In view of your last two answers I understand that all that you meant by your

2770 answer to XQ55 was that if any working drawings relating to the cement plant and model roaster were at the laboratory at the time the burning took place, they were burned, so far as you know?

Mr. RICHMOND: Objected to as grossly leading.

Mr. HICKS: The witness having clearly shown that he has no actual knowledge of what was burning, it is thought that the question is proper.

A. Yes.

2771 RDQ61. Referring to XQ82 and your answer thereto, with regard to how you fix the date of January 1899, when you say Mr. Edison gave you the nine sketches; does the date March 21, 1899 in your handwriting on the sketch No. 5 assist you in fixing the date of January 1899?

Mr. RICHMOND: Objected to as leading.

A. Yes, it does.

RDQ62. Referring to XQ84 and your answer thereto, please state whether the general plan which you laid out was intended for use directly in connection with the models for the laboratory kiln, or for the New Village plant?

2772 A. For the model erected at the laboratory.

RDQ63. Are you a member of any society of mechanical engineers?

A. Yes sir, I have been a member of the American Society of Mechanical Engineers since June, 1894, and did join at Mr. Edison's request.

RDQ64. Who requested you to search for all the drawings relating to roaster No. 1 as erected at the laboratory?

A. Mr. Hicks.

RDQ65. Referring to sketch No. 2, please state whether when the 150 foot kiln was erected at the

laboratory a screw conveyer extended through the 50 foot brick chamber? 2773

A. No sir.

RDQ66. Referring also to sketch No. 2, please state whether the cross section of the brick chamber was similar to the cross section shown on the lower part of sketch No. 2?

A. No sir. The cross section of the brick section of the experimental kiln as erected at the laboratory was straight or flat on the bottom.

RE-DIRECT EXAMINATION CLOSED.

RE-CROSS EXAMINATION BY Mr. RICHMOND: 2774

RXQ67. Are these nine pencil sketches that you have discussed the ones that you referred to in the first sentence of your answer to Q3?

A. Yes sir.

RXQ68. Are these nine sketches all the sketches that Mr. Edison handed you at about that time in that connection?

A. Yes sir.

RXQ69. You then say "I made paper drawings of this kiln"; where are they?

A. They cannot be found. Those are the ones I was looking for in May 1912.

RXQ70. Then you say that in March 1899 you made a drawing of a section of a kiln 8 feet in outside diameter, etc; where is it? 2775

A. It cannot be found.

RXQ71. Then you say that after you tested the full size sections you made, "We then made some more drawings changing the inclination of the cylinder". Where are these additional drawings?

A. They cannot be found.

RXQ72. Why cannot all these drawings be

2776 found; can you give any explanation for your failure to find them?

Mr. HICKS: Objected to unless the witness knows. If the witness knows, complainants' Counsel will be glad to have him state the facts; but any conjecture is objected to.

Mr. RICHMOND: Defendant's Counsel would be only too glad if the witness were given a chance to state what he knows without these preliminary suggestive remarks by Counsel for Complainants.

2777

Mr. HICKS: Then if what defendant's Counsel says is said in good faith, let him withdraw his question, and ask the witness directly as a preliminary question whether he knows or not.

A. Well, I have spent over three weeks in looking for those drawings, and as the things in the room that had those drawings in and also the drawings from the New Jersey & Pennsylvania Concentrating Works were burned up at Mr. Edison's directions, I have been unable to find any drawings relating to the model kiln that was erected at the laboratory in 1900 and 1901, excepting the nine pencil sketches that  
2778 have been produced.

Mr. HICKS: Answer objected to as speculative and a conclusion, the witness has said that he was not present at the burning and that he did not examine the things burned.

RE-CROSS EXAMINATION CLOSED.

DEPOSITION CLOSED.

EMIL HERTER.

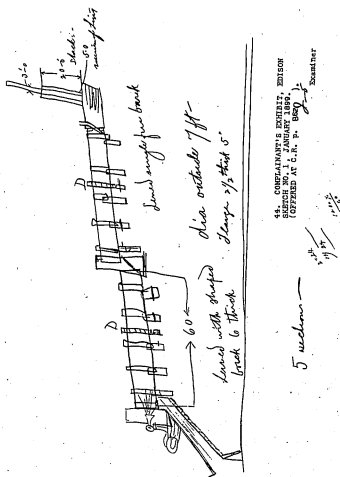
PROOFS CLOSED.

1068

Complainant's Exhibits.

39202 44. Complainant's Exhibit, Edison  
Sketch No. 1, January 1899.

(Offered at C. R. p. 862).



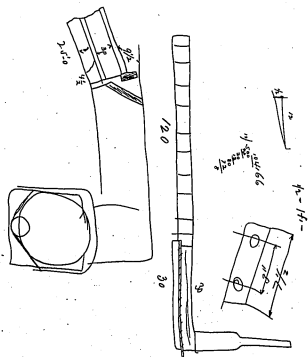
44. COMPLAINANT'S EXHIBIT, EDISON  
SKETCH NO. 1, JANUARY 1899.  
(OFFERED AT C. R. p. 862.)  
Examiner

Complainant's Exhibits.

1069

46. Complainant's Exhibit, Edison 39205  
Sketch No. 2, January 1899.

(Offered at C. R. p. 916).



46. COMPLAINANT'S EXHIBIT, EDISON  
SKETCH NO. 2, JANUARY 1899.  
(OFFERED AT C. R. p. 916.)

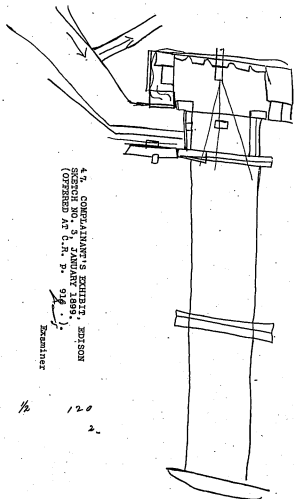
Examiner

1070

Complainant's Exhibits.

3208 **47. Complainant's Exhibit, Edison**  
**Sketch No. 3, January 1899.**

(Offered at C. R. p. 916).

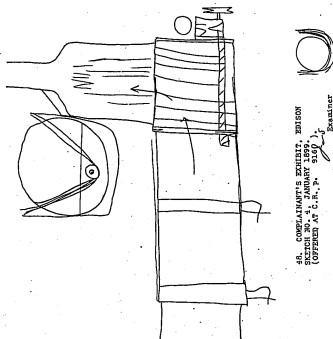


Complainant's Exhibits.

1071

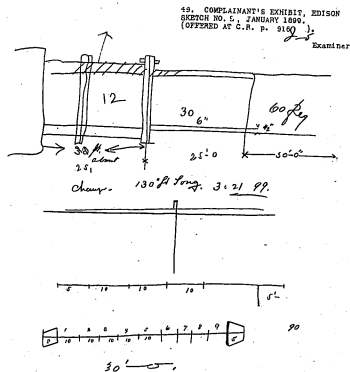
48. **Complainant's Exhibit, Edison** 3211  
**Sketch No. 4, January 1899.**

(Offered at C. R. p. 916).



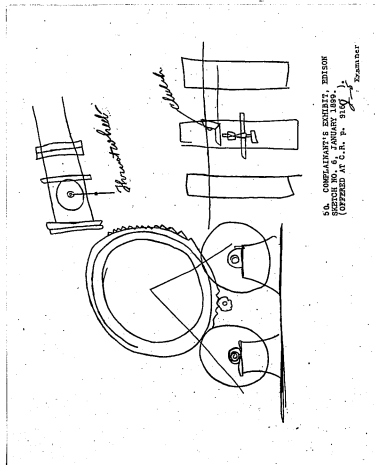
3214 49. Complainant's Exhibit, Edison  
Sketch No. 5, January 1899.

(Offered at C. R. p. 916).



50. Complainant's Exhibit, Edison  
Sketch No. 6, January 1899.

(Offered at C. R. p. 916).



1074

Complainant's Exhibits.

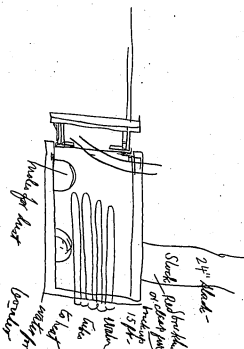
3220

**51. Complainant's Exhibit, Edison  
Sketch No. 7, January 1899.**

(Offered at C. R. p. 916).

51. COMPLAINANT'S EXHIBIT, EDISON  
SKETCH NO. 7, JANUARY 1899.  
(OFFERED AT C. R. p. 916.)

Exhibit



Complainant's Exhibits.

1075

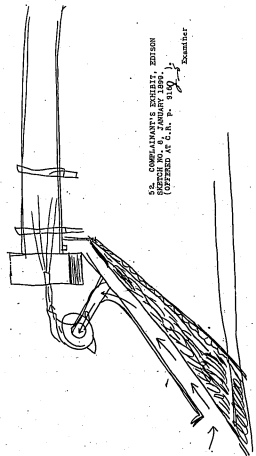
**52. Complainant's Exhibit, Edison  
Sketch No. 8, January 1899.**

(Offered at C. R. p. 916).

52  
1075  
Edison  
Sketch No. 8, January 1899.  
(Offered at C. R. p. 916.)

52. COMPLAINANT'S EXHIBIT, EDISON  
SKETCH NO. 8, JANUARY 1899.  
(OFFERED AT C. R. p. 916.)

Exhibit



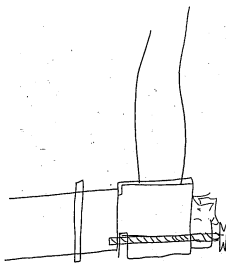


1076

Complainant's Exhibits.

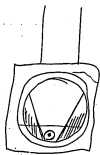
3929 53. Complainant's Exhibit, Edison  
Sketch No. 9, January 1899.

(Offered at C. R. p. 916).



53. COMPLAINANT'S EXHIBIT, EDISON  
SKETCH NO. 9, JANUARY 1899.  
(OFFERED AT C. R. P. 916).

*Ed*  
Examiner.



Legal Box 152

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District Court of the United States,

SOUTHERN DISTRICT OF NEW YORK.

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THOMAS A. EDISON and NORTH  
AMERICAN PORTLAND CEMENT  
COMPANY,

*Complainants,*

*against*

ALSEN'S AMERICAN PORTLAND CE-  
MENT WORKS,

*Defendant.*

In Equity  
No. 2-152.  
On Edison  
Patent  
No. 802,031.

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Complainants' Brief on Final Hearing.

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LOUIS HICKS,

*Solicitor and counsel for complainants,*

71 Nassau Street,

New York, N. Y.

# SUMMARY AND INDEX OF COMPLAINANTS' ARGUMENT.

Thomas A. Edison et al. v. Alsen's American Portland Cement Works.

Statement.....	1
This is a patent suit in equity, based upon a patent for one of Mr. Thomas A. Edison's most remarkable and meritorious inventions, No. 892,521, granted Oct. 24, 1896, for apparatus for burning Portland-cement clinker, known as "The Edison long kiln".....	1
The Edison long kiln gave to the world a new instrument and a new process differing essentially from the kilns and processes of the prior art and producing new, improved and unexpected results.....	2
When knowledge of the physical characteristics of the Edison long kiln was first imparted to those skilled in the art, they ridiculed it, refused to accept it and would not believe the reports of the new and improved results obtained by its use. This was because they did not and could not then perceive the new and improved process introduced thereby. Since about 1896, however, no kiln other than an Edison long kiln has been built in the United States.....	2
Mr. Edison's new instrument, the long kiln, with an internal diameter preferably from 1/20th to 1/10th of its length, resulted, and could have resulted only, from his acute perception and understanding of the process carried on in a rotary kiln in the burning of raw cement material to produce Portland-cement clinker. In the prior art the process was not understood; nor was there in the prior art any patent or publication explaining a process, or even suggesting the possibility of a process, to be performed according to the principles explained in the Edison patent in suit and involved in the construction and operation of the Edison long kiln.....	3

At the date prior to January, 1899, of Mr. Edison's invention of the long kiln, those skilled in the art had reached the fixed conclusion and opinion that the standard 60-foot kiln, the internal diameter of which was about 6 feet or  $1/12$ th of the length, was the perfection of rotary kiln-construction. This conclusion and opinion persisted for several years after the physical characteristics of the Edison long kiln were known. In this we find the explanation of the opposition and ridicule with which those skilled in the art regarded the Edison long kiln for several years, until finally they perceived their error and universally adopted it. ....

Complainants' expert, Mr. Bentley, shows that whatever intelligent study there may have been in the prior art of kiln-structures, it resulted only in a wrong conclusion as to the correct construction and the adoption of the 60-foot kiln as the standard and maximum of kiln length; and that this erroneous conclusion was so firmly fixed in the minds of those skilled in the art that a remarkable prejudice persisted in favor of the 60-foot kiln for several years after the art learned of the construction and use of Mr. Edison's new instrument, the long kiln, having a length of 150 feet and an internal diameter of about 6 feet, the ratio between the length and the internal diameter being approximately as 25 to 1. ....

Mr. Bentley's qualifications as an expert in this art. ....

Mr. Bentley shows that the wisdom and experience of the prior art led to the conclusion that the maximum efficiency had been reached at a length of 60 feet, any greater length being objectionable. ....

Mr. Bentley shows, upon the authority of defendant's expert, Mr. Soper, that the 60-foot kiln continued to be the standard until 1895 or 1897, that when Mr. Edison installed his 150-foot kilns he was laughed at; and that the art had Mr. Edison to thank, as Mr. Soper said, "for the biggest single advanced step in the history of the industry". ....

Mr. Bentley shows, from the testimony of defendant's expert, Mr. Curtis, that the variations in lengths of the shorter kilns, none of which were material, prior to the adoption of the 60-foot kiln as the kiln of the length

of maximum efficiency, only prove that whatever intelligent study there may have been in the prior art of the problem of kiln-structures led to a wrong conclusion. ....

Mr. Bentley points out the remarkable prejudice persisting in favor of the standard 60-foot kiln for several years after the known construction and use of Mr. Edison's 150-foot kiln; and shows that the strong and universal opposition to the Edison long kiln is not consistent with Mr. Curtis's contention that the Edison kiln merely carried forward the old practice along natural lines. ....

The invention described and claimed in the Edison patent in Suit, No. 8692,631, for apparatus for burning Portland-cement clinker. ....

Complainants' experts, Mr. Bentley and Prof. Carpenter, show that the Edison patent in suit is a notable document; that its teachings are correct and even abreast of the art as it stands today; and that, as shown by the evidence, no discoverable error is set forth in it. The statements of the patent, thus supported, are proof of the facts stated therein. ....

The specification sets forth the use, for the dry process, of the standard 60-foot kiln, having an internal diameter of about 6 feet or  $1/12$ th of the length, for a number of years prior to the Edison invention. It points out the defects thereof, including its short combustion and chinking zone; its short chinking zone; its great waste of heat; its injurious effects of carbon dioxide and loss of heat; the injurious effects of carbon dioxide given off near or in its combustion and chinking zone; its waste of fuel; its imperfect combustion of the fuel; the limited amount of fuel that can be burned in it; the excess of air required to be heated in it, causing an additional loss of heat; its limited output of cement clinker; the inferior quality of its clinker output, due to under-burnt centres of the clinker having no cementing properties whatever; and the impossibility of remedying its defects. ....

The specification correctly states that, although kilns somewhat longer than 60 feet may have been suggested for the dry process, no such kilns had been practically utilized, nor had any advantages over the standard 60-foot kiln been discovered therewith. ....

The Montezuma and Colton kilns referred to were mere accidents from which the art learned absolutely nothing (infra, pp. 265-267, 267-277). ....

The specification correctly sets forth that by very greatly lengthening the kiln without proportionately increasing its diameter, so that the ratio of length to internal diameter is preferably about as 30 or 35 to 1 to 6, 100 or 100 to 5, instead of as 12 to 1 (50 to 5), the process is so changed that it becomes possible to burn perfectly in the kiln great quantities of fuel in the presence of enormous quantities of cement material, the carbon dioxide being substantially completely eliminated before the material reaches the combustion and clinkering zone, and thereby to produce in enormous quantity clinkered material of superior quality completely burned throughout with a minimum consumption of fuel per barrel of clinker produced, and hence with the highest efficiency and economy, per unit of product..... 15

The specification correctly sets forth that there is a definite relation between the length and diameter of the kiln, the extent of the clinkering and combustion zone and the load of material that is passed through the clinkering zone at a given time, and that by reason thereof a maximum output of clinker is secured with the perfect burning, and a minimum expenditure, of fuel per unit of product. This relation Mr. Edison discovered as a result of experiment with his new instrument, the long kiln.... 18

By his new instrument Mr. Edison secures a long calcining zone, preferably 150 feet or more in length, in which the great load of cement material passing through the kiln absorbs heat from the gases or products of combustion, with the result that the carbon dioxide is substantially completely eliminated from the new material before the combustion and clinkering zone is reached, and the heat of the gases or products of combustion is thereby so utilized that they pass up the stack of the long kiln at a temperature considerably below a red heat and, as the proof shows, at a temperature as low as 700° F..... 20

By his new instrument Mr. Edison also secures a long combustion and clinkering zone, from 50 to 40 feet or more in length and several times as long as the combustion and clinkering zones possible in the standard 60 foot and other kilns of the prior art. The long combustion and clinkering zone is made possible by the new process carried on in the long kiln. It very greatly increases the distance through which, and the time during which, the substantially completely calcined material is subjected to a clinkering temperature, and thereby produces a cement clinker of superior quality, completely clinkered throughout, in enormous quantity and at a minimum expenditure of fuel, labor and other items of cost..... 21

By reason of its new construction and new mode of operation, Mr. Edison's new instrument is capable of carrying enormous quantities of cement material and of burning at the same time very large quantities of pulverized fuel in the presence thereof, an operation that was not possible in the kilns of the prior art, with the result that the great weight of cement material forms and continuously maintain a thick and continuous, adherent protective coating of cement clinker upon the firebrick lining of the kiln, which would not be possible without the great pressure of the very heavy load, thereby protecting the firebrick lining from the excessive heat which tends rapidly to destroy it..... 22

By reason of its new construction and new mode of operation, the draft created in Mr. Edison's new instrument is much greater than it was in the kilns of the prior art, a very important feature, of the new process of the long kiln, since it rapidly removes from the combustion and clinkering zone all carbon dioxide formed by combustion of the fuel or given off by the cement material. The draft of the long kiln, being greater, is, therefore, capable of perfect regulation, as by means of a damper near the top of the stack, which was not possible in kilns of the prior art, so that perfect combustion of the fuel is obtained and at the same time no heat is lost by having an excess of air over what is required for combustion..... 23

Mr. Edison's new instrument separates the calcining zone from the combustion and clinkering zone. This is a very important feature of the new process, made possible by the new instrument. The conception of the substantial separation of these two zones was suggested with Mr. Edison, and he was the first to conceive of and devise a kiln wherein substantially complete calcination should take place in one zone and combustion and clinkering should take place in another separate zone..... 24

In recapitulation of the features of the invention, the patent refers to the great length of the kiln, preferably about 150 feet; to only a very slight increase, if any, in internal diameter; to the ratio of length to internal diameter, which should preferably be as 20 or 25 to 1, instead of as 12 to 1; to the perfect burning of very large quantities of fuel in the presence of enormous quantities of cement material; to the superiority and uniformity of the product; to the regulation of combustion by controlling the draft by means of a damper in the stack; to the abstraction and utilization of the heat of

the gases or products of combustion between the combustion zone and the stack, whereby the material is gradually and not abruptly raised in temperature in its passage to the combustion zone; to the substantially complete elimination of carbon dioxide from the material by the time it reaches the combustion zone, thus avoiding imperfect combustion and making it possible to burn perfectly very large quantities of fuel; to the long combustion and elikbering zone of 40 feet or more in length and the advantages secured thereby; to the gradual increase in temperature of the material in its passage toward the combustion and elikbering zone, so that the reactions take place slowly and only a slight increase in temperature is necessary to elikber the material; to the great load of material that can be carried and burned to elinker in the kiln, whereby an enormous output is obtained, heat is abstracted from the gases and utilized, and the thick and continuous adherent, protective coating of elinker is formed and maintained upon the fire-brick lining . . . . . 27

Finally, the patent points out that if any of the factors referred to are materially changed a sacrifice in efficiency results . . . . . 29

The important features of the invention of the patent in suit as explained by complainant's expert, Mr. Bentley . . . . . 30

Mr. Bentley shows the true nature of the invention. He points out that Mr. Edison made a sudden jump from 60 feet to 150 feet, leaving the diameter practically unchanged; and that the physical characteristics and dimensions of his long kiln constitute a structural expression of his new process or method . . . . . 32

Mr. Bentley shows that Mr. Edison conceived the idea of separating the calcining operation, with its volume of smothering carbon dioxide, from the elikbering operation, which requires the intense heat of unsmothered combustion, in one and the same kiln; and that to accomplish this he invented the long kiln with its great length, preferably about 150 feet, and its internal diameter preferably about 1/20th to 1/30th of the length. In the prior art no such separation was ever accomplished nor was the Edison mode of operation ever contemplated (Idra, pp. 79-107). In order to show what the action of a 60 foot kiln is defendant was obliged,

in 1911, to hunt up an old 60 foot kiln and experiment with it (fallaciously). No disclosure of the action, or of the causes of the defects therein, could be found in the prior art. It is to be found only in the Edison suit in suit, as the original source of information on the subject . . . . . 33

The testimony of defendant's expert, Mr. Carter, corroborates Mr. Bentley's statement that the Edison long kiln, differing from the kilns of the prior art, separates the calcining operation from the combustion and elikbering operations and thereby secures the unexpected and striking results stated in the patent. Prof. Carpenter, Dr. Kiefer and Mr. Mason, practical experts for many years in this art, agree with Mr. Carter in this respect and point out that what Mr. Carter said is true only of the Edison long kiln and is not true "of every longer kiln as compared with every shorter one" citing the Colton and Whitwell 71, 90 and 45 foot kilns. Furthermore, Mr. Edison was the first to disclose the fact that by (very greatly) lengthening the kiln, keeping the diameter substantially the same, such separation, mode of operation and results could be secured . . . . . 35

Mr. Bentley points out that Mr. Edison repeatedly emphasizes the fact that his discovery involves a new relation of length to diameter; and that this is not a mere enlargement, but involves a specific arrangement and a change in the relation of kiln-dimensions. The Edison long kiln is, therefore, he says, one having a new form and new proportions, the new form and new proportions having novel functions and results, not to be found in a merely bigger kiln, which would be of no practical use. By very greatly increasing the length, leaving the diameter practically the same, Mr. Edison did the entirely unexpected thing for which there was no feature of knowledge or information in the prior art . . . . . 46

Defendant's witness, Mr. Sooper, in October, 1920, published an article stating that it had "been observed in practice that the diameter bears a certain relation to the length of the kiln when output and fuel consumption are considered." This accords with the statements of the patent and the testimony of Mr. Bentley . . . . . 48

Mr. Bentley points out that there is a striking cooperation and inter-connection between the steps of the new process carried out in the Edison long kiln, exhibiting a high quality of invention . . . . . 49

Another aspect of the Edison method embodied by Mr. Edison's new form of kiln is, as stated by Mr. Bentley, that it is a mode of utilizing, in the cement-burning process itself, a large amount of heat which had previously been wasted in the kilns of the prior art and of producing and utilizing at the same time much more heat. This best utilization of the long kiln marks the starting stop of Mr. Edison's new process..... 50

The evidence establishes the great superiority of the Edison long kiln over kilns of the prior art. In the following comparison the dry process is assumed..... 54

The invention of the Edison patent in suit has made it possible to obtain, from a single rotary kiln, an output of more than 1,600% greater than the greatest output of any kiln of the prior art. One Edison long kiln will produce from 600 to over 3,400 barrels of clinker per day of twenty-four hours. The kilns of the prior art did not produce more than 175 barrels per day, and usually the output was considerably less. Mr. Edison's disclosure of the true nature of the process, taking place in a rotary kiln, has made it possible to increase slightly the output of the standard feed-fest kilns of the prior art, but even today the output does not much exceed 225 barrels per day and is generally considerably less..... 54

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II. Statement of outputs of kilns of the prior art per day of 24 hours, together with the lengths and internal diameters of the kilns, as shown by the evidence..... 55

III. Since the date of the Edison Patent in suit, copiers of the standard feed-fest kilns of the prior art have been made, as they became familiar with the teachings of the Edison invention, to increase slightly the output of the kiln, from about 175 to about 225 barrels per day..... 57

It is a notable fact, which could not have been produced in the prior art, that the new instrument and new process of the patent in suit have multiplied the clinker output for each foot of the length of a rotary kiln, with an enormous saving in fuel and other costs. With an Edison kiln, having a length of 232 feet, for ex-

ample, it is possible to produce 2,476 barrels of clinker of superior quality per day, or 15 barrels of clinker for each foot of the 232 feet of the length of the kiln; while in the prior art the greatest output obtainable, with the processes and 60 feet and other kilns then known, did not exceed, and generally fell below, 175 barrels of clinker of inferior quality per day, or 3 barrels for each foot of the 60 feet of the length of the kiln. This unexpected and startling result, consisting not merely in a greater output per kiln but in an almost incredible multiplication of the output for each foot of the kilnlength, was obtained solely through the inventive genius that enabled Mr. Edison to conceive of the new process and to invent and construct the new instrument for its performance—very greatly increasing the length of the kiln, keeping the diameter substantially the same. The invention involved a radical departure from the practices, processes and results of the prior art. It is far ahead from nature of mere enlargement. The prior art could not possibly have perceived it, for, if they could, it is not creditable that, perceiving it, they would have failed to use it..... 59

Table showing the multiplication of the clinker output per day, for each foot of the length of a rotary kiln, obtained by the invention of the Edison patent in suit..... 61

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#### II. Edison Long Kilns..... 61

An enormous saving in coal or other fuel has been effected by the invention of the Edison long kiln. The fuel consumed in the kilns of the prior art was from 50% to 100% or more greater than is the fuel consumed in the Edison long kiln, per barrel of clinker produced. In the long kiln it is possible to produce clinker with a fuel consumption of about 15 lbs. of coal per barrel of clinker. In the prior art it required about 125 lbs. or from 150 to 195 lbs. or more..... 61

I. Statement of the fuel consumption per barrel of clinker produced in the Edison long kilns, as shown by the evidence..... 61

II. Statement of the fuel consumption per barrel of clinker produced in the kilns of the prior art, as shown by the evidence..... 62

The Edison long kiln and the new process performed thereon have made it possible to burn enormously greater quantities of fuel in the presence of proportionately greater quantities of cement material and at the same time to effect a very great saving in fuel per barrel of clinker produced. No kiln or process known in the prior art was capable of producing this new and unexpected result. By discovering that a definite relation existed between the factors involved, Mr. Edison changed that relation and thereby produced his new instrument and new process.

The Edison long kiln utilizes in the burning process itself the greater portion, from 49% to 89%, of the very large amount of heat that was wasted and carried up the stack, by the gases discharged, in the kilns of the prior art. The long kiln also utilizes large additional quantities of heat abstracted from the additional gases resulting from the burning of the enormously greater quantities of fuel. By the new process performed in the long kiln it is possible to utilize the heat of the gases or products of combustion to such an extent that the temperature thereof, upon being discharged through the stack, is as low as 700° F., approximately the temperature (523° F.) of ideal draft capacity. In kilns of the prior art the temperature of the gases discharged through the stack was approximately 1800° F., which means that about 75% of the total heat developed was lost in the kilns of the prior art. This great saving and utilization of heat constitutes one of the remarkable features of the Edison long kiln.

I. Statement of the temperature of gases discharged through the stacks of kilns of the prior art, as shown by the evidence.

II. Statement of the temperature of gases discharged through the stacks of Edison long kilns, as shown by the evidence.

The calcining zone of the Edison long kiln is as large in time as long as it was in the kilns of the prior art, in an Edison kiln 120 feet long the length of the zone of substantially complete calcination is about 120 feet, while in the standard 620 foot kilns of the prior art the length of the zone of incomplete calcination was only about 49 feet. This difference in the lengths of the zones of calcination, the internal diameters being substantially the same, is one of the very important features of the Edison invention, since it is one of the important factors in the carrying out of Mr. Edison's new process.

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I. Statement of the lengths of the long zones of substantially complete calcination in Edison long kilns and the effects obtained thereby, as shown by the evidence.

II. Statement of the lengths of the short zones of incomplete calcination in 620 foot and other kilns, such as were used in the prior art, and the defects thereof, as shown by the evidence.

III. The idea of a zone of calcination substantially separate and distinct from a zone of combustion and clinkerizing did not exist in the prior art.

IV. Neither the patent to Hansome of 1886 nor the O'Brien article of 1893, of the prior art, nor the Stanger and Blount article of August, 1901, of the subsequent art, suggested a zone of calcination substantially separate and distinct from a zone of combustion and clinkerizing.

The combustion and clinkerizing zones of the Edison long kilns are several times as long as were the combustion and clinkerizing zones of the kilns of the prior art, although the diameters are substantially the same. This important feature of advantage in the long kilns results not merely from the greatly increased length of the kiln but from the new process made available by Mr. Edison's new instrument, a rotary kiln of 120 feet or more in length, with an internal diameter, preferably, of from 1/20th to 1/50th of the length. In an Edison kiln 120 feet long, it is possible to maintain a clinkerizing zone from 48 to 80 feet or more in length, or more than four times the length of the clinkerizing zone of the standard 620 foot and other kilns of the prior art, and, at the same time, to produce enormously greater quantities of Portland cement clinker of superior quality with perfect combustion of enormously greater quantities of fuel, but with a fuel consumption as low as 45 lbs. of coal per barrel of clinker produced, as compared with 120 lbs. or more of coal per barrel for the 60 foot and other kilns in the prior art, the fuel consumption per barrel being from 95% to 105% or more greater for the 60 foot and other kilns of the prior art than for the Edison long kiln.

I. Statement of the lengths of the clinkerizing zones of Edison long kilns, as shown by the evidence.

II. Statement of the lengths of the short clinkerizing zones in the kilns of the prior art, as shown by the evidence.

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The facts, proved by Prof. Carpenter, Dr. Kiefer and Mr. Bacon, with respect to the operation of kilns 45, 49 and 78 feet in length and with respect to Edison kilns 100 feet or more in length, show that Mr. Carter was in error, when, speaking theoretically, and without practical experience, he said, in 1931, that what he had said with regard to Mr. Edison's correct description of the operation of the long kiln of the patent was "true of every longer kiln as compared with every shorter one." Moreover, no such principle or belief existed in the prior art. On the contrary, it was believed that any lengthening of the 60 foot kiln would be detrimental. There is not a scintilla of evidence in the case to support Mr. Carter's or Mr. Edison's new instrument and new process. . . . 105

It was inventive genius of the highest order and greatest merit that enabled Mr. Edison to perceive the true nature of the process of burning Portland cement clinker in a rotary kiln, to analyze the existing, clinkering, combustion and other operations taking place, to explain and to define each of these operations, to point out the full significance of each, to explain how and when each should be performed, bying emphasis upon the substantial complete separation of the calcining operation from the combustion and clinkering operations, and to invent and devise a new instrument with which his new process could be effectively performed. . . . 106

The length of the flume of the Edison long kiln is several times as long as it was in the kilns of the prior art. In an Edison kiln 100 feet long, it is possible, by reason of Mr. Edison's new process, to create and maintain a flame of from 50 to 60 feet or more in length, in the front and several operation of the kiln, while in the kilns of the prior art, even as they are used today, it is not possible to create or maintain a flame having a length over 20 feet or less. From the length of the flame in a rotary kiln, the length of the so-called "dead space" where the temperature is below the clinkering temperature, must be subtracted, in determining the length of the clinkering zone of the kiln. Hence, as pointed out in the past art, the clinkering zone of an Edison long kiln is from three to five times or more as long as could have been the clinkering zone in any kiln of the prior art. . . . 107

1. Statement of the lengths of the flames of the Edison long kilns, as shown by the evidence. . . . 108

II. Statement of the lengths of the flames of the 60 foot and other kilns of the prior art, as shown by the evidence. . . . 109

Sudden down or flushes of large quantities of material, containing large percentages of carbon dioxide, into the combustion and clinkering zone are less frequent in the Edison long kiln than in the 60 foot and other kilns of the prior art. . . . 110

In the 60 foot and other kilns of the prior art, the effect of flushes of fine material, high in carbon dioxide, was cumulative, because of the short combustion and clinkering zone of such kilns, and frequently accentuated the slowing down or stopping of the operation of the kilns and rendered the clinker output inferior, because of lack of uniformity in the burning. In the Edison long kiln these defects are obviated by the long calcining zone and the long clinkering and combustion zone. . . . 111

The long calcining zone and the long combustion and clinkering zone, and the substantial separation of these zones and of the operations performed therein in the Edison long kiln afford to the operator of the kiln complete control and great latitude in the manipulation of the kiln, since the reactions and steps of the process take place gradually and slowly. In the kiln of the prior art no such control or latitude of manipulation could be attained, and it was necessary to watch their operations very closely and frequently to slow down or stop the kiln, since the kiln would lose their heat when additional quantities of carbon dioxide were given off by the sudden down or flushes of material into the combustion and clinkering zone. For these reasons, among others, the clinker produced in the Edison long kiln is of superior quality, being more uniformly burned and, therefore, free from clinkers having underburned centers and no cementing properties whatever. . . . 112

By virtue of the superior draft conditions shown by the evidence to exist in the Edison long kiln, very much larger quantities of air are supplied to the kiln and the carbon dioxide, resulting from the combustion of the fuel and the calcination of the cement material, is removed more rapidly and more efficiently from within the kiln. At the same time the temperature of the gases and pro-

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ducts of combustion is reduced, through contact with the great load of incoming cement material throughout the long calcining zone, to such an extent that the temperature may fall as low as 700° F. at the stack, which is approximately the temperature (1212° F.) of ideal draft conditions. Hence, the superior draft conditions created by and within the Edison long kilns are an important factor in effecting the perfect combustion of very much greater quantities of fuel in the presence of enormously greater quantities of cement material.....	119
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The great reduction in the temperature of the gases and products of combustion, at the stack of the Edison long kiln, greatly reduces the volume thereof. Moreover, in the long kiln the velocity of the gases and products of combustion is approximately 35 miles an hour and the temperature may be as low as 700° F.; while in the short kilns of the prior art the velocity obtainable was approximately only 15 miles an hour and the temperature was about 1800° F. or more. Hence, as shown, enormously greater quantities, both by weight and by volume, of gases and products of combustion are carried through the stack of the Edison long kiln and at a very much greater velocity than was possible in the kilns of the prior art, the stacks and the diameters of the kilns being substantially the same .....	120
The evidence shows that in the kilns of the prior art any attempt to alter the draft, as by changing the dimensions of the stack, would result in rendering the operation of such kilns still more inefficient; and that, on the other hand, the draft of the Edison long kiln, being of greater capacity and stronger because of the higher velocity of the gases, is capable of perfect regulation, as by means of a damper near the top of the stack or a door at the base of the stack, which was not possible in the kilns of the prior art, so that perfect combustion of the fuel is attained and at the same time no heat is lost by heating an excess of air over what is required for combustion. In the kilns of the prior art the combustion of the fuel was imperfect and 75% of the total heat supplied to the kilns was lost, 35% being lost in heating excess air discharged with the gases through the stack....	124

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The regulation of the draft in the Edison long kiln, as by means of a damper at the top of the stack or a door at the base of the stack and the impracticability thereof in the kilns of the prior art are fully shown by the evidence .....	125
The perfect combustion of the fuel in the Edison long kiln and the imperfect combustion of the fuel in the kilns of the prior art, as shown, respectively, by the absence or presence of a carbon monoxide flame at the base of the stack, due to the admission of air through the opening where the upper end of the kiln enters the stack, or in the outer air where the gases and products of combustion issue from the top of the stack, are fully shown by the evidence.....	127
The evidence establishes that, as stated in the patent, there is a substantially complete elimination of the carbon dioxide from the cement material before it enters the long combustion and clinkering zone of the Edison long kiln. If this were not the case, it would not be possible, as it is, to burn perfectly therein great quantities of fuel in the presence of enormous quantities of cement material; nor would it be possible, as it is, to create and maintain therein, at the same time, a flame of great length and thereby a clinkering zone of such great length that it is possible in one day, to burn, in a single Edison long kiln, sufficient clinker of superior quality to fill 1474 barrels or more .....	127
Citation of passages in the record explaining how the carbon dioxide, resulting from the combustion of the fuel and the calcination of the cement material, is removed in the Edison long kiln in such manner that it has substantially no injurious effect and is not so removed in the 60 foot and other kilns of the prior art....	128
The evidence establishes that, as stated in the patent, in the 60 foot and other kilns of the prior art only a short flame and only a short combustion and clinkering zone could be created or maintained; that only very small quantities of fuel could be burned, even imperfectly, in the presence of very small quantities of cement material; and that important clinkers having underburned centers were constantly produced. Therefore, it necessarily follows that in the 60 foot and other kilns of the prior art large percentages, and relatively large quantities, of carbon dioxide were contained in the cement material when it entered the combustion and clinkering zone and were given off therein, thereby interfering with combustion and lowering the temperature of the combustion and clinkering zone .....	129

Adds from all the other evidence in the case, the comparative lengths of the flames and the comparative lengths of the combustion and discharging zones, the diameters of the kilns being the same, conclusively establish the substantially complete elimination of carbon dioxide from the cement material in the Edison long kiln, and the incomplete elimination thereof in the 49 foot and other kilns of the prior art, before the material enters the combustion and discharging zone,..... 130

The essential fact is that in the Edison long kiln there is a very long space, from 40 to 50 feet or more in length, substantially free from carbon dioxide, in which perfect combustion and clinkering take place. In the 49 foot and other kilns of the prior art there was no such space, or if there was it did not exceed 7 or 8 feet in length. As rotary kilns are operated today under the teachings of the Edison invention, the flame terminates in each class of kilns approximately at the point where 15% of carbon dioxide remains in the cement material. In the long kiln this point may be from 50 to 60 feet or more up from the discharge end of the kiln, while in the kilns of the prior art, even as they are used today, it is only 10 feet or less up from the discharge end of the kiln. Because of the greater load of material in the long kiln greater quantities of carbon dioxide are given off between this point and the discharge end, but the great length of the remaining space affords ample opportunity for the evolution of the 10% of carbon dioxide and the superior draft conditions efficiently remove it, so that the material being substantially free from carbon dioxide then travels from 40 to 50 feet or more through the combustion and clinkering zone ..... 131

The evidence shows that, as stated in the patent, the great weight of cement material in the Edison long kiln forms and continuously maintains a thick and continuous, adherent, protective coating of cement on the clinker upon the fire-brick lining of the kiln, which would not be possible without the great pressure of the very heavy load there, by protecting the fire-brick lining from the excessive heat which tends rapidly to destroy it. The Stanger and Blount article of August, 1901, shows that the difficult problem of protecting the kiln-lining was not solved in the prior art. It has been by the Edison long kiln ..... 137

The internal diameter of the Edison long kiln is uniform throughout the length of the kiln and does not, therefore, narrow at the upper end, as in kilns constructed in the prior art, and before the Edison invention was recognized and utilized. Hence, the escape of the gases and products of combustion, laden with carbon di-

oxide, is not impeded in the Edison long kiln as it was in kilns constructed in the prior art and before the Edison invention was recognized and utilized..... 142

It is the very great length of the Edison long kiln and the ratio of its length to its internal diameter that have made available Mr. Edison's new process and thereby secured the new and marvelous results of the invention, the possibility of which was beyond the comprehension of the prior art. The internal diameter being substantially the same as it was in the prior art, the results of the invention are not to be attributed merely to a slight, if any, increase in diameter. After the Edison invention became the subject of general discussion, but before its merit was recognized, these skilled in the art took a step in the wrong direction, attempting to increase the output by increasing the diameter, keeping the length substantially the same ..... 144

With regard to the economy of the Edison long kiln, the evidence shows that the expense for operating labor, repair parts, repair labor and supplies, other than coal, is at least twice as much per barrel for the 49 foot kiln as for the long kiln. This great saving is in addition to the great saving in fuel consumed, in capital invested and in other costs per unit of product. The Edison long kiln also diverts the expense for the water-jacketed feed pipes used with the 49 foot and other kilns of the prior art which would clog up, explode and damage the kilns and stacks. The very high temperature of the gases discharged through the stacks of the kilns of the prior art render it necessary to protect the feedpipes by water-jackets to prevent them from burning up ..... 147

The economy and efficiency of the Edison long kiln are so great that no kiln other than an Edison long kiln has been built in the United States since 1904 or prior thereto. The average annual output of each kiln in the United States has, in consequence, been increased from 35,000 barrels in 1902 to 85,700 barrels in 1911, notwithstanding the low output of the old kilns then still in use. 148

The general downward trend of the price of cement to the public, which has been very marked since 1906, Prof. Carpenter attributes to the great economy and efficiency of the Edison long kiln. Like defendant's witness, Mr. Soper, who said that the Edison long kiln is "the biggest single advance step in the history of the industry," Prof. Carpenter regards it "as the greatest advance in the art which has been produced within the last ten or twelve years" and points out that there has been no other improvement in recent years that could have had any material effect in causing the very marked fall in the price of cement ..... 149

The great saving in coal, per barrel of clinker produced, effected, in the Edison long kiln is one of the greatest benefits ever conferred upon the people of this country. For the year 1910, as shown by the evidence, the possible and approximate saving of coal, in the production of 75,550,000 barrels of cement, was 3,447,800,000 lbs. or 1,723,900 tons of coal. The Circuit Court of Appeals for this Circuit has said that so well considered ones can be found where a patent has been overthrown on the ground of non-patentability where the "benefit conferred upon mankind" by the invention of the patent "is valuable and extensive" (*O'Connor Co. v. McMillan*, 168 Fed. 533, 539). The enormous increase in output and the other economies of the Edison long kiln, shown above, are comparable to the great saving in coal effected by it

That a new process was made available by Mr. Edison's new instrument is established by the evidence. The foregoing review of the features of the invention and of the new and marvelous results secured thereby, as set forth in the patent and shown by the evidence, proves that a new process is performed in the Edison long kiln, the characteristic physical features of which are its very great length and the ratio of its length to its internal diameter. The existence of a new process might be assumed from the great increase in economy and efficiency secured by the changes that resulted in the new instrument. The patent, however, correctly explains, and the evidence shows, what the new process is and what are the principles involved in the construction of the new instrument and in its new mode of operation

Description of the new process performed in the Edison long kiln, as shown by the evidence

For the reasons stated, the Edison invention is a patentable invention (*Diamond Rubber Co. v. Consolidated Tire Co.*, 230 U. S. 438, 434-436, 441, 442)

Dr. Kiefer points out the salient features of the process performed in the Edison long kiln and shows that the process is a new process fundamentally and essentially different from the processes performed in the 80 foot and other kilns of the prior art

The able argument of Mr. Dyer in the Patent Office, with which Prof. Carpenter and Mr. Bentley agree, made clear to the Examiner, that in dealing with apparatus in which chemical and allied processes are carried out, a change in size of apparatus may result in very marked changes in process, which cannot possibly be predicted. Although the apparatus is changed, the character of the material acted on does not change, so that a different relation is created between the material acted on and the apparatus, necessitating a variation in the conditions under which a desired result can be secured

Prof. Carpenter, agreeing with Mr. Dyer, shows, from the evidence, that the process taking place in the Edison long kiln is distinctly different from that taking place in the 80 foot and other kilns of the prior art, the processes differing from each other "in every fundamental and material part" and not "by mere shades or by degree"

Mr. Mason shows that the principles of the Edison invention may be and have been applied to the construction and operation of a kiln having a length of about 260 feet and an internal diameter of 1/20th of the length, or 13 feet, and that such a kiln will produce more than 3000 barrels of clinker per day with good coal economy. Since in the prior art there was no known principle by which the 3600 foot kiln could be improved upon or was improved upon, it necessarily follows that the Edison invention involves not merely a new instrument but also a new process

Defendant's expert, Mr. Carter, shows that the process taking place in the Edison long kiln proceeds according to the principles stated in the patent. He, therefore, necessarily admits that the process is a new process, since his attempted qualification to the effect that what he had said "was true of every longer kiln as compared with every shorter one" is shown by the evidence to be untrue. Mr. Carter's information to the effect that any advantage, in output, fuel consumption, mode of operation or otherwise, was to be derived by any lengthening of the kilns of the prior art was derived solely from the Edison invention and not from anything in the prior art. Prof. Carpenter, Dr. Kiefer and Mr. Mason agree with Mr. Carter's showing that the process taking place in the Edison long kiln proceeds according to the principles stated in the patent

After the Edison invention became known, defendant riveted together, and to end, two 600 foot kilns, thereby making an Edison long kiln having a length of 120 feet and an internal diameter of nearly  $\frac{1}{2}$  of the length, or 45 feet, the preferred ratio of internal diameter to length stated in the patent. By this change in kiln-construction, defendant increased the clinker output per kiln from about 115 or 200 barrels per day to 600 barrels per day and decreased the fuel consumption from 120 pounds to 75 or 75 pounds of coal per barrel of clinker produced. Dr. Kiefer, Prof. Carpenter, Mr. Mason and Mr. Bentley show that this marked increase in output and decrease in fuel consumption resulted and could have resulted only from a change in the process, because, inter alia, the diameters being the same, regarding the kilns as a conveyor it is physically possible to pass as much cement material through the one as through the other; and, in the absence of cement material, it is possible to burn as much fuel and produce as long a flame in the one as in the other; while in the practical operation of the respective kilns, for the burning of Portland cement clinker, the results are, as shown, widely different and if it were attempted to burn in the 60 foot kiln the same amount of cement material that can be efficiently burned in the Edison 120 foot kiln no clinker at all could be produced. 178

It is the length of the clinkering zone and the percentage of carbon dioxide remaining in the cement material, as it progresses through that zone, that determine the facility with which the material may be converted into clinker, since, if the carbon dioxide has been substantially completely eliminated, the heat units are applied to clinkering and not to calcining the material. Therefore, the novelty of Mr. Edison's process appears, inter alia, from the fact that in an Edison kiln the carbon dioxide which the material may be retained to about 35% at a distance of 50 feet or more from the discharge end of the kiln, while in the 60 foot kiln of the prior art there is 30% of carbon dioxide in the material at 40 feet, and from 15% to 25% at 20 feet, from the discharge end. The facility with which cement material containing a low percentage of carbon dioxide, is converted into clinker is not affected by the quantity of cement material being acted upon within the kiln, it being sufficient for the purposes if the operating conditions within the kiln are such as to reduce the carbon dioxide to a low percentage when the material still has a substantial distance to travel in the clinkering zone at a clinkering temperature. Clinkering is a gradual process, requiring time. It proceeds in a zone and does not occur at a point 181

Citation of passages in the record showing that clinkering is a gradual process which begins only when the greater part of the carbon dioxide has been driven off and a clinkering temperature has been reached, and continues until practically all of the carbon dioxide is driven off and is then completed, the material forming at first into lumps, porous and spongy masses which subsequently become denser and denser as the carbon dioxide is more completely eliminated and substantially all the particles of the cement material are gradually brought to the point of incipient fusion. 189

As pointed out by Mr. Bentley, defendant and its witnesses seem ignorant of, or unwilling to recognize, the facts and principles described in the patent, which are not only completely proved by the tests of Dr. Kiefer, Prof. Carpenter and Mr. Mason and by their and Mr. Bentley's testimony but give the only explanation in the entire record of the marked superiority of Mr. Edison's new instrument and new process over the kilns and processes of the prior art. While defendant's witnesses all admit the increased output and the decreased fuel consumption of the Edison long kiln, they fail to point out the reasons therefor, with the exception of defendant's expert, Mr. Carter, who, as shown (supra, pp. 35, 376, 377) admits that the process taking place in the Edison long kiln proceeds according to the principles stated in the patent. 190

The invention of the patent in suit was made by Mr. Edison prior to January, 1890. The evidence shows that in January, 1890, Mr. Edison made nine sketches which disclosed clearly the invention described and claimed in the patent in suit and that thereupon he exercised extraordinary diligence in reducing the invention to actual practice. He thereby revolutionized the art, since every kiln constructed in this country since 1904 has been an Edison long kiln made in accordance with Mr. Edison's sketches of January, 1890. 192

Mr. Malloy and Mr. Herter show that in the year 1888 Mr. Edison devoted to utilities, in the manufacture of Portland cement, the mechanical device for grinding, grinding, drying, separating and conveying material, which he had successfully worked out for the concentration of low grade iron ore at a cost of two and a half million dollars. 193

Mr. Mallory shows that in 1898 it was Mr. Edison's intention, at first, to use, in connection with the machinery previously devised by him for the concentration of iron ore, the 60 foot kiln which was then in general use; but that, upon investigation, Mr. Edison stated that the 90 foot kiln was "a rotten proposition" and that he could invent a kiln which would be "very much more efficient in economy and have a much larger output"..... 123

In January, 1899, Mr. Edison, having made, exhibited to Mr. Mallory and Mr. Herter nine used pencil sketches, which are in evidence, disclosing clearly the invention of the patent in suit, explaining that with such a kiln he could make 1,000 barrels of clinker per day, and directed Mr. Herter to make drawings of the kiln according to the sketches and the explanations which he then gave. On March 21, 1899, Mr. Herter, at the direction of Mr. Edison, noted a change on Sketch No. 8 and dated the notation on that day..... 134

Description of Mr. Edison's nine sketches of January, 1899..... 135

"The evidence shows that Mr. Edison used extraordinary diligence in reducing the invention to practice, beginning in January, 1899, by causing to be made working drawings, models of rotary kiln-sections, models of the entire kiln, and models and drawings of his proposed cement plant; by constructing at his laboratory a kiln 160 feet long and there operating the kiln to produce cement clinker as a test of the invention; and finally by constructing and putting into commercial operation at New Village, N. J., two kilns each 160 feet long, one of which incorporated 190 feet of the laboratory kiln. The models of rotary kiln-sections, provided with different linings, were used experimentally, from March to June, 1899, to determine the rate of progression of fire and course material through a rotary kiln. The use of these models, says Prof. Carpenter, was novel and proves that Mr. Edison was working on a new process. Clinker from 60 foot kilns, purchased for these experiments by Mr. Edison in June, 1899, was found by him to have underburned centers, as stated in the patent..... 205

Models of Mr. Edison's 160 foot kiln erected at his laboratory are shown in the four photographs of September 16 and 28 and October 7 and 7, 1899, forming Complainers' Exhibit Nos. 32-35. The book of 409 photographs, taken from July, 1899, to June, 1902, shows the reduction to practice of the invention both at the laboratory and at the New Village plant..... 207

In September, 1899, Mr. Mason began and on November 29, 1899, finished, under the direction of Mr. Edison, the working drawings of the rotary part of the 160 foot kiln erected at the laboratory. This rotary part was 108 feet long and had an internal diameter of from 5 1/2 feet to 6 feet, or about 1/5th of the total length of the 160 foot kiln. Mr. Edison's nine sketches of January, 1899, disclosed in a rough form what Mr. Mason's drawing disclosed in a finished form. Mr. Mason's drawing is Complainers' Exhibit No. 27..... 208

For the purpose of locating a cement plant, Mr. Edison employed chemists in and before September, 1899, to analyze samples of cement material obtained in the Lehigh Valley. At the same time, while Mr. Mason was making his drawings for the 160 foot laboratory kiln, Mr. Edison, lying down in the dust on the floor, sketched with a piece of chalk a section of the kiln, showing the details thereof, and stated that he would make a kiln in which, by reason of its length, practically all of the carbon dioxide would be expelled from the material by the heat before the material reached the point where the coal was burning, explaining that coal would not burn in an atmosphere of carbon dioxide..... 209

From the fall of 1899 to the spring of 1901 Mr. Edison erected at his laboratory, in accordance with his invention, a kiln 160 feet long. Three photographs dated April 1, 1901, Complainers' Exhibit Nos. 24-26, show the rotary cast iron sections, 108 feet in length, and a brick extension, 50 feet in length, in place upon the carrying wheels and foundation. A drawing dated February 9, 1897, effected by Mr. Edison, Complainers' Exhibit No. 28, shows the frame-work for the kiln-house of the Edison plant then being erected at New Village, N. J., together with a kiln 160 feet long composed entirely of rotary sections, which would have an internal diameter of from 5 1/2 to 6 feet. A drawing dated November 18, 1901, Complainers' Exhibit No. 29, shows the same 160 foot rotary kiln as it was constructed at New Village and is shown in the drawings of the patent in suit. These matters and the dates thereof show, as do the sketches of January, 1899, that it was Mr. Edison's original and continuing intention to construct his kiln entirely of rotary sections and, preferably, 160 feet in length..... 210

On July 15, 1901, the laboratory 150 foot kiln was put into operation for the burning of Portland-cement clinker. Good clinker was made, of which Mr. Edlison preserved and has produced samples in the form of clinker, cement and a briquette, together with an analysis of the cement. The kiln was started with a feed of enough raw material to produce 40 barrels of clinker per hour, using 50 pounds of coal per barrel. The tests were continued thereafter until about October, 1901. A very long clinkering zone was secured, good clinker was continuously made and the only effort was to determine what was the maximum output with the minimum amount of coal per barrel. Mr. Edlison's 150 foot kiln being so very different from anything previously used in the art, it was found that experts in the use of the 50 foot kiln were of very little use in operating them, either at the laboratory or at New Village. It was in the laboratory tests of July and August, 1901, that Mr. Edlison found that there was "a definite relation" between the several factors stated in the patent. .... 214

Having demonstrated the success of his invention at his laboratory, Mr. Edlison, in October, 1901, shipped the 150 foot rotary part of the laboratory kiln, with its appliance, to the cement plant at New Village where it was to form 100 feet of the 150 foot rotary kiln No. 1 of that plant and where it has been in successful commercial operation ever since. So successful was the invention shown to be at the laboratory that another 150 foot rotary kiln, No. 2, was constructed and erected at the New Village plant at the same time. The drawings dated February 9, 1901, and November 15, 1901, which are like the sketches of January, 1899, and like the drawings of the patent, were used for the construction of the two 150 foot kilns, Nos. 1 and 2, in the winter of 1901-1902 and the spring of 1902. The photograph of February 4, 1902, Compliments' Exhibit No. 37, shows the 150 foot kiln, No. 25. Since 1902 eight additional 150 foot kilns, similar to the original two kilns, have been installed at the New Village plant. .... 215

The evidence shows that, after the work of construction and erection had been completed at the New Village plant, it took some time, as it had at the laboratory, for the workmen to learn, under Mr. Edlison's guidance and

instructions, how to operate the two 150 foot kilns, since their mechanical construction, especially their great length and proportionately small internal diameter, and the process carried out therein were so radically different from anything previously known or used in the art. This having been successfully done, in tests made in the summer of 1902, the plant started in regular operation in the fall of 1902. The first shipment and sale of cement was made March 2, 1903. .... 217

The evidence shows that no difficulty of any kind arose, with regard to the Edlison kiln or process of the patent in suit, either at the laboratory or at New Village, that was not successfully solved by the application of the principles of construction and operation shown clearly in the sketches of January, 1899. .... 221

What Mr. Edlison said, as well as what he did, as shown by the evidence, proves that his conception of his invention was complete in January, 1899, with respect both to his new instrument and his new process. Having previously perceived the defects of the kilns and processes of the prior art, he pointed them out and explained to others how they would be overcome by his invention. .... 222

The evidence and the results achieved show that Mr. Edlison employed able assistants, Messrs. Darling, Mason, Herter, Mallory and others, to aid him in reducing his invention to practice, both at the laboratory and at the New Village plant. .... 225

The evidence shows that the long series of experiments conducted by Mr. Edlison at his laboratory, in reducing his invention to practice, cost him more than \$50,000. It is inconceivable that an inventor of Mr. Edlison's ability should have expended this large sum for experimental work in adapting and refining his invention to practice if what he did was obvious. .... 225

There was no sale or public use of the invention, by Mr. Edlison, more than two years before the date of application for the patent in suit, on December 6, 1902; nor in any such defense set up in the answer. The work done at the laboratory was purely experimental. The laboratory kiln was not operated before July 15, 1901; nor was it completed so as to be ready for operation till May or June, 1901. It was kept by Mr. Edlison under his personal supervision and control, and in his possession, until shipped to New Village in October, 1901. .... 226

Complainants have produced a remarkable succession of sketches, drawings, photographs and other exhibits, fully proved, showing conclusively that Mr. Edison's conception of the invention was complete in January, 1899, and that thereafter he diligently reduced it to practice. All relevant drawings and all other relevant matter that could be found at this late date have been produced. The fact that the wooden models of the kiln-section and some other drawings that are quite immaterial cannot be found is of no importance, since the exhibits found and produced disclose the whole story. .... 230

The decided cases show that Mr. Edison is entitled to a date as early as January, 1899, as the date of his invention, for at that time, as shown, his conception of the invention was complete. Moreover, as shown, Mr. Edison thereupon used not only reasonable but extraordinary diligence in reducing the invention to practice. .... 231

The charts of tests performed by Dr. Kiefer, Prof. Carpenter and Mr. Mason, upon the Vulcunite 125 foot and 60 foot kilns and upon the Edison 150 foot kilns, confirm the statements of the patent with respect to the differences between the processes carried out in the 60 foot and other kilns of the prior art and the Edison long kiln. So do the Dinan and Newberry charts of tests of a 150 foot and a 60 foot kiln, respectively, presented by Mr. Dyer in the Patent Office in support of his argument to this effect upon the application for the patent in suit. .... 234

Complainants' samples of cement material were properly taken while the kilns were in operation, by means of pipes inserted into the kilns at different points so that the kilns were not allowed to cool down before the samples were taken. The samples were properly prepared for analysis, as shown by Complainants' Exhibit Nos. 125A, by being finely ground and quartered according to the standard method. The analysis, moreover, are shown to be correct by the testimony of Dr. Kiefer and Mr. Brown who prepared and analyzed the samples. .... 235

The results of Dr. Kiefer's and Mr. Mason's tests of the 150 foot Edison kilns at New Village, N. J., in 1912 and 1908, are exhibited by Complainants' Exhibit charts Nos. 5, 9 and 19 and are shown by the evidence to be correct. .... 237

The results of Dr. Kiefer's, Prof. Carpenter's and Mr. Mason's tests of the 125 foot and 60 foot Vulcunite kilns in 1912 are exhibited by Complainants' Exhibit charts Nos. 7 and 8 and are shown by the evidence to be correct. Exhibit No. 8, however, more properly represents the operating conditions of the two kilns, since the samples for Exhibit No. 8 are more numerous and the loss of the kilns was not up to normal when the samples for Exhibit No. 7 were taken. .... 238

The results of the Dinan and Newberry tests of a 150 foot and a 60 foot kiln, respectively, are exhibited by the Dinan and Newberry charts, forming parts of Complainants' Exhibits Nos. 19 and 11. Upon the application for the patent in suit, the examiner witnessed Edison long kilns and kilns of the prior art in operation, telling the Newberry charts as part of his two convincing arguments (C. R. 98-189-1912) showing: (1) that a different process is carried out in the Edison long kilns; and (2) that the Edison long kiln is a new and patentable apparatus. Mr. Dyer reviews the prior art and cites Carnegie Steel Co. v. Clamarda Iron Co., 145 U. S. 465, and Edison Co. v. United States Co., 62 Fed. 389, 390, and 47 Fed. 454, 455, which hold, respectively, that the enlargement of a reservoir in apparatus and the employment of a diaphragm, instead of a rod, of carbon in an electric light bulb involved patentable invention, because in each case, as in the case at bar, the change in dimensions, of the reservoir or of the carbon, secured improved results. .... 240

Mr. Beatty shows that the tests of Dr. Kiefer, Prof. Carpenter and Mr. Mason, shown by Complainants' Exhibit charts, not only completely prove the statements of the patent but give the only explanation in this record of the marked superiority of the Edison long kiln over the kilns of the prior art. Referring to the fallacy of the Dyer and Gantor tests, he points out that defendant offers "no explanation whatever" of such marked superiority and says that he can conceive of no reason therefor if the processes are in fact the same. .... 243

Dr. Kiefer and Prof. Carpenter show the misleading and absurd character of the diagrams made by defendant's counsel and by him designated "Kiefer cross-examination diagram" Nos. 1-7. Diagram No. 1 fails to take into consideration the operating conditions of the kilns, especially the superior draft conditions and greater diameter length of the long kilns, as well as its greater output and



greater capacity for burning fuel, while diagrams Nos. 27 not only fall in the same respect but represent a kiln 50 feet long as being of the same length as a kiln 125 feet or 150 feet long, by representing the length in percentages of an assumed standard and not in feet, thereby eliminating one of the essential physical characteristics of the Edison kiln which make possible the new process and the new results ..... 243

Citation of passages in the record wherein Dr. Kiefer and Prof. Carpenter show the misleading and absurd character of defendant's so-called Kiefer cross-examination diagrams Nos. 17..... 248

The analyses of the samples of cement material obtained by defendant's witnesses, Soper and Ganser, from Edison 125 foot and 150 foot kilns and from 60 foot kilns shown, as clearly pointed out by Dr. Kiefer, Prof. Carpenter and Mr. Mason, that the kilns were not properly or normally operated in the production of the samples. All that defendant discloses by the Soper and Ganser samples is that by the improper operation of such rotary kilns it is possible to obtain certain undesirable results, which show how the rotary kilns should not be operated. The Supreme Court has repeatedly pointed out that it is always easy to find persons ready to show how not to do a thing (*Loom Co. v. Higgins*, 108 U. S. 8, 280, 286; *The Telephone Cases*, 129 U. S. 1, 540.) ..... 249

Dr. Kiefer, Prof. Carpenter and Mr. Mason prove, from the tables of analyses produced by defendant's witnesses, Soper and Ganser, that the Edison 125 foot and 150 foot kilns and the 60 foot kilns from which they took samples were not properly or normally operated. In the Edison long kilns an insufficient amount of fuel and an excessive amount of cement material were used. In the 60 foot kilns an excessive amount of fuel was consumed in proportion to the amount of cement material in the kilns. They also show that an examination of the Soper and Ganser samples confirms the conclusions which they drew from the Soper and Ganser tables of analyses..... 249

I. The Soper tables of analyses..... 249

Citation of passages in the record dealing with the depth of material and the volume, density and weight thereof in long and short kilns..... 256

Citation of passages in the record dealing with the rate of advance of material through a kiln and showing that it is not uniform and cannot be accurately determined ..... 256

II. The Soper samples..... 256

III. The Ganser tables of analyses and samples..... 256

It is a self-evident proposition that in the normal and proper operation of rotary kilns, under the teachings of the Edison patent in suit, calcination of the material must be more complete in an Edison 125 foot kiln than in a 60 foot kiln when the material reaches the lower end of the kiln. Hence the Soper and Ganser tables of analyses, which are intended apparently to dispute this self-evident proposition, could have been made up only from analyses of samples taken from kilns improperly operated and of samples not properly selected or prepared for analysis. It is not surprising, therefore, to find that the results produced by Soper and Ganser are widely different from each other..... 258

Defendant's expert, Mr. Carter, in the passage quoted from his testimony (*supra*, p. 35, 170) clearly shows that the Soper and Ganser tables of analyses are false, for what Mr. Carter said is the very opposite of what the Soper and Ganser tables purport to show. Defendant has produced no witness who has testified that the Soper and Ganser tables represent the normal and proper operation of such kilns. Moreover, the chemists who selected and analyzed Soper's samples taken from the 125 foot and 60 foot kilns and Ganser's samples taken from the 125 foot kilns were not produced as witnesses. Their "haphazard" tables of analyses and Soper's "haphazard" diagrams for the 125 foot and 60 foot kilns based thereon, being objected to, are not evidence..... 259

It is to be observed that defendant has produced no samples taken from its infringing 120 foot kilns and no analyses thereof ..... 260

The prior art, shown by defendant's proofs, contained not even the remotest suggestion of the invention of the Edison patent in suit. The prior art was entirely ignorant of the principles involved in the construction and in the mode of operation of the Edison long kiln; nor did there ever exist in the prior art a rotary kiln, suitable for the burning of Portland-cement clinker, having a length approximating 100 feet or an internal diameter approximating from 1/20th to 1/30th of the length or capable of performing the Edison process, had that process been discovered. At the date of the Edison invention, January, 1880, and for several years thereafter, those skilled in the art regarded the 6x60 foot kiln as the standard and perfection of kiln-construction and believed that any increase in the length would be a positive detriment.....

The Ransome patent of 1886 and the Giron article of 1893 are the only patent and publication of the prior art relating to rotary kilns for the burning of Portland-cement clinker adduced by defendant. They describe rotary kilns of from 35 to 39 feet in length, the approved 29 foot kiln having an internal diameter of 1/8th of the length, or 6 feet. They contain no hint of the Edison invention, and show that the principles of the invention were far beyond the horizon of the prior art. The Ransome kilns were an utter failure and the rotary kiln was abandoned as hopeless in England. While Giron claimed that "it had success was assured" in the use of the 39 foot kiln in the United States, his contention was dispensed by Mr. Looley .....

Durzey's petroleum furnace for retreating ore, of 1882, was an abandoned experiment. Dr. Kiefer, Prof. Carpenter, Mr. Mason and defendant's witness, Durzey, show that it could not possibly have been used for the burning of Portland-cement clinker. Moreover, it had been abandoned and forgotten years before Ransome, in 1888, made the first rotary kiln for such a purpose and failed in his attempt to use it. Durzey's furnace was of no assistance to Ransome or to Giron and can have no bearing on the Edison invention.....

The Mineral Industry Quotations, published in 1894, and the Willoughby British patent of 1894 are entirely irrelevant. They describe, respectively, rotary furnaces, 60 feet or less in length, for roasting ores and burning town refuse. As shown by the contemporaneous Giron article of 1893 and the other facts in the case, they were of no assistance in the construction and operation of rotary kilns for the burning of Portland-cement clinker. This completes the list of the patents and publications of the prior art adduced by defendant.....

If we believe defendant's witness Durzey, a feet witness testifying under a per diem payment, a short rotary kiln 12 feet long, for burning wet slurry according to the wet process, was erected at Montezuma, N. Y., and almost immediately burned down, some months before April, 1894. It is doubtful if it was ever in operation although Durzey "believes" that it was. It added one more to the list of abandoned types of kilns. At this time, 1894, Newberry failed in his attempt, at Bay Bridge near Sandusky, Ohio, to use an 80 foot kiln for the wet process and abandoned the attempt. The proofs show that at the date of the Edison invention, January, 1880, there was no kiln in existence for the wet process over 40 feet in length .....

If we believe defendant's witness, Durzey, a short rotary kiln, 15 feet long, was erected in 1893 or 1894 by the California Co. at Colton, Cal. for the dry process. Prof. Carpenter, having acted as consulting engineer, since 1895, for the California Co., with regard to this and other kilns, describes it. He shows that its length was 12 feet; that it was in no way different, in its mode of operation, from the standard 60 foot kiln, except that it was inferior thereto; and that its output did not exceed 50 barrels per day previously to 1894. As he found upon investigation and as was held by a court judgment, its internal diameter narrowed at the upper end. Its efficiency and capacity were lower than those of any operative kiln described in this entire record. That it, as shown by Durzey's and Prof. Carpenter's testimony, the art learned absolutely nothing. It was so complete a failure that in 1898 the California Company installed a standard 60 foot kiln. At the date of the Edison invention, January, 1880, no kiln for the burning of Portland-cement clinker, by either the dry process or the wet process, was in existence, except this 12 foot kiln, which, if it actually did exist in the prior art, was a mere accident, not known and not considered by the art, and exceptionally inefficient .....

Citation of passages in the record, wherein Prof. Carpenter shows the ineffectiveness of the 19 foot and 60 foot kilns of the California Co. at Colton, Cal. .... 272

Citation of passages in the record, wherein Prof. Carpenter shows the installation of five Edison 120 foot kilns, in 1905, and four Edison 100 foot kilns, in 1915, and the introduction of the Edison process at the Colton plant of the California Co. and the great advantages thereof ..... 272

Crampton's British patent of 1877 is not in evidence, although defendant has given notice that it will rely upon it. The existence of the Crampton patent in the prior art proves the great merit of the Edison invention. Although, in 1877, the Crampton patent purported to show how best could be utilized and how Portland-cement clinker could be made in a rotary kiln, nevertheless, as shown by the Glavin article of 1893 and the Stanger & Blount article of 1901, Hansome failed entirely in his attempt to use a rotary kiln for such a purpose in 1882; Stokes failed in 1891; and all others had failed, so that in 1893 all attempts to use a rotary kiln for the burning of Portland-cement clinker had been abandoned in England, 36 foot kilns being then tried in the United States, after repeated failure ..... 277

Crampton's British patent No. 2,438 of June 22, 1877. .... 277

All of defendant's remaining references are patents or publications subsequent to the date, January, 1893, of the Edison invention. Nevertheless, not one of them describes or discloses the invention; they relate, up to 1908, either to wet-process kilns, or to dry-process kilns 60 feet or less in length, or to experimental, laboratory kilns, or to kilns for roasting ores. The statements quoted therein are "hearsay" statements, not evidence, objection upon this ground having been taken in each case (C. L. pp. 272-274, 275, 276) ..... 278

Engineering Record for May 6, 1899. .... 278

Schwetscherische Baureitung of June 24, 1899. .... 279

The London Builder for July 14, 1900. .... 281

Duryee's article of July 26, 1900. .... 282

Quillings' British patent, No. 2,648. .... 282

The 60 foot wet-process kilns, with 50 foot drying drums, of 1901, of the Sandusky Co. at Syracuse, Ind., of the subsequent art ..... 282

The Stanger & Blount article published August, 1901. .... 282

"Comment", published March, 1902, and a picture of a small kiln in Smith's laboratory, published in 1908. .... 287

Fisher's Magazine of May, 1902, and Engineering Record of August 22, 1902. .... 288

The Iron Age, published September 7, 1906. .... 288

Larson's paper, published in February, 1908. .... 289

Smith's 70 meter kiln advertisement of 1910. .... 289

The China and Canada 80 foot kilns for burning lime are without date or description. .... 290

The Hansome patent of 1884, Stokes' British patent of 1887, De Navarro's patent of 1891, the Stanger & Blount article of 1901 and many other patents and publications disclosing all the matter adduced by defendant, were considered by the Patent Office upon the application for the Edison patent in suit; and so were all the contentions against the patent, now made by defendant. No exception is to be made of the inefficient Colton 73 foot kiln, since, as shown, Mr. Edison pointed out in his original specification that no advantages had been discovered therewith over the standard 60 foot kiln. Hence, the presumption arising from the grant of the patent is strengthened by the fact that the patents, publications and subject matter referred to were considered by the Patent Office (American Co. v. Glen Co., 251 Fed. 328, 268-327) ..... 290

The evidence shows that the wet-process kiln is not a dry-process kiln, for the reason, inter alia, that the upper ends of the kilns are differently constructed. Claims 1-8 of the Edison patent in suit specify apparatus for drying dry material, the other claims being limited by details. At the date of the Edison invention, January, 1890, there was no wet-process kiln in existence having a length of over 60 feet, the Montezuma 75 foot and the Newberry 80 foot wet-process kilns having been destroyed and abandoned in 1894. The wet-process kilns differed radically from the dry process. In the prior art there was no kiln of any kind in which the Edison process could be performed. .... 291

A dry-process kiln is necessarily lined with fire-brick throughout the entire length of the kiln. Moreover, as shown, it is necessary to protect the fire-brick lining from the excessive heat which tends rapidly to destroy it. There is no fire-brick or other lining in the upper part of a wet-process kiln, where the bare metal of the kiln-shell is exposed to the moderate heat therein; and where 2 bars, shelves or similar devices are contained in order to adjust the wet slurry..... 251

In the dry process the material is crushed and then dried in a rotary or other dryer and is then pulverized, before it is fed into the kiln and subjected to the burning process. In the wet process the material is ground and mixed with water and is then partially dried or dried, either by passing it through a rotary dryer or feeding it into the unlined upper end of the kiln provided with 2 bars, which acts as a dryer, before it is subjected to the burning process. In neither case is the drying operation any part of the burning process; nor is the dryer, whether it be a separate instrument or the upper part of the kiln itself, any real part of a kiln for burning Portland-cement clinker. The evidence shows that the dry process the moisture in the material is about  $\frac{1}{8}$  of 1% when the material is fed into the kiln and that in the wet process it is from 40% to 65%. Hence, the whole length of a dry-process kiln is a kiln for the burning of Portland-cement clinker; within the meaning of the claims of the patent in suit; while in a wet-process kiln only a very short portion thereof, at the lower end, is a kiln for such a purpose..... 252

The inefficiency and waste of the wet-process kilns are so great that they are now almost obsolete. Since the upper end of a wet-process kiln is a mere drying apparatus, its clinkering zone is very short, its output is very small and its fuel consumption is very high per barrel of clinker produced. In the wet-process kilns of the prior art, 60 feet in length, the clinkering zone was from 7 to 8 feet long, the output was from 89 to 100 barrels per day and the fuel consumption was from 106-128 pounds of coal per barrel of clinker produced; while in the subsequent art the results were nearly the same, even for a wet-process kiln 110 feet in length, the clinkering zone being 10 or 12 feet long, the output from 100 to 110 barrels per day and the fuel consumption from 170-180 pounds or more of coal per barrel of clinker produced..... 254

1. 60 foot wet-process kilns of the prior art..... 254

## II. 110-120 foot wet-process kilns of the subsequent art..... 256

It is clear, therefore, that a wet-process kiln does not and cannot embody the Edison invention; and that no knowledge derived from any wet-process kiln of any length, and especially from those of the prior art which were 60 feet in length or less, could have led to the making of the Edison invention. Wet-process kilns consist (1) of a dryer for the wet slurry and (2) of a very short kiln for the burning process. Hence, as the evidence shows, wet-process kilns 100 feet in length, for example, are very much less efficient than a 60 foot dry-process kiln, since the length of the former, exclusive of the dryer, is less than the length of the latter..... 256

Mr. Dentley shows, for the reasons above set forth, that the wet-process kilns should be excluded from Mr. Carter's diagram (D, Exh., p. 5) of kiln lengths. It should also be observed that all kilns, following the Colton 1846 kiln of Mr. Carter's diagram, belong to the subsequent art, except Newberry's Sandusky 80 foot wet-process kiln which failed and was abandoned in 1864..... 256

By the invention of his long kiln, Mr. Edison solved the problems which remained unsolved after repeated attempts to solve them in the prior art. It was attempted without success in the prior art, later kilns, (1) to calcline the material before feeding it into the kiln; (2) to utilize the very large amount of heat that was carried on with the gases and products of combustion; (3) to employ an 80-foot kiln in 1864 for the wet process; (4) to avoid an excess of air within the kiln; (5) to regulate the draft of the kiln; and (6) to protect adequately the fire-brick kiln lining. The failure to solve these problems in the prior art proves the merit and patentability of the Edison long kiln. By his invention Mr. Edison not only solved all these problems, but he also produced a kiln of remarkable efficiency and economy, thereby obtaining the numerous new results and advantages above set forth. The Edison long kiln has no discoverable defects..... 257

The Edison long kiln conquered the art against strong opposition. The evidence shows that the prior art had reached the fixed conclusion and opinion that the standard 6x30 foot kiln was the maximum of kiln length and efficiency. Therefore, for several years after the physical characteristics of Mr. Edison's long kiln became known, the art refused to accept it and persisted in installing 60 foot kilns. . . . . 298

Men experienced in this art, like Mr. Hawk, Dr. Kiefer, and Prof. Carpenter had never heard of a kiln longer than 60 feet, either for the wet process or the dry process, before they learned of Mr. Edison's 150 foot kiln. . . . . 298

Lathbury & Spackman's book, "The Rotary Kiln," published in 1902, made no mention of a kiln longer than 60 feet and stated that "the most satisfactory size is one six feet in diameter and sixty feet long" and that there was small probability of any change, except in conveying and elevating devices. Lathbury & Spackman installed defendant's 60 foot kilns in 1900-1902. . . . . 298

In 1902 the Lehigh Valley produced 75% or more of the total yearly output of Portland cement manufactured in this country. It is now 125 rotary kilns, all of which were 60 feet in length, except two, which were 48 feet in length . . . . . 299

In the latter-part of 1902, Dr. Kiefer and Mr. Shaffer, knowing of the Edison 150 foot kiln, very seriously considered the question of installing long kilns at the Martin's Creek plant of the National Cement Co. Knowing the opinion of practically every expert in the Lehigh Valley and that it was adverse to the Edison long kiln, they consulted Prof. Carpenter at Ithaca, N. Y. After due deliberation, these three experts advised the National Cement Co. not to install long kilns, but to install 60 foot kilns, and sixteen 60 foot kilns were thereupon actually installed by that company. "Dr. Kiefer could not figure how the long kilns could result in the economies claimed for them," and neither Prof. Carpenter nor any of the cement engineers, with whom he discussed the matter, could "see any engineering reason at that time why the mere lengthening of the kilns as proposed by Edison" could increase the output or decrease the fuel consumption. Subsequently, in 1904 or 1905, the sixteen 60 foot kilns were lengthened to from 120 to 135 feet,

having been purchased by the Alpha Co. after consultation with Prof. Carpenter, who, in the meantime, had come to recognize the value of the Edison invention and had changed his opinion with regard thereto. These facts show how preposterous is defendant's contention that the Edison invention was obvious, and prove conclusively the patentability of the invention. . . . . 299

While the Edison long kiln was under discussion, Prof. Carpenter, not believing in it at the time, advised the Quaker Co. in 1902-1903, to install 60 foot kilns, and 49 foot kilns were purchased and installed. . . . . 300

Prof. Carpenter and Mr. Mason show that no manufacture of rotary cement kilns offered or suggested a kiln over 60 feet in length prior to 1904. Since 1900 no kiln other than an Edison long kiln has been installed in this country . . . . . 300

Mr. Hawk, Dr. Kiefer, Prof. Carpenter, Mr. Mahory, Mr. Mason, Mr. Herter and Mr. Duxbury and defendant's witnesses, Soper and Duryen, all testify that up to 1902 and for several years thereafter the 60 foot kiln continued to be the standard, notwithstanding that Mr. Edison's invention had become the subject of general discussion. There is no evidence of an Edison long kiln built in this or any other country, prior to 1904, except by Mr. Edison . . . . . 300

In April and May, 1903, as shown by letters written at that time, the Vulcanite Co. and the Illinois Steel Co., manufacturers of cement, and Mosser & Son, manufacturers of kilns, were unable to decide whether or not an addition of 70 feet to a 60 foot kiln would be of any advantage, although, as shown by the letters, they were fully aware of Mr. Edison's 150 foot kiln. The Vulcanite Co. decided against any lengthening of the 60 foot kiln and installed an additional 60 foot kiln subsequently to 1904. Mosser & Son said "it is an experiment until the thing has been thoroughly demonstrated" and the Illinois Steel Co. said that the whole thing "is something that can only be positively stated after trial and not stated in advance to give the results of the trial to the Vulcanite Co. in about a year." The letters show that there was even then no understanding of the Edison process, made possible by the long kiln. Since those skilled in the art could not perceive or understand the principles of the Edison long kiln invention, even when they knew of Mr. Edison's 150 foot kiln, no one but an infringer would now contend that the Edison invention was obvious. . . . . 301

From 1892 to 1904, when the Edison long kiln was a subject of general discussion but was not understood or accepted by the art, a number of dry-process kilns of enlarged diameter and from 75 to 85 feet in length or thereabout were constructed; but no Edison kiln 150 feet or more in length, excepting Mr. Edison's 150 foot kiln, were in existence during this period. Since 1904, however, no kiln other than an Edison long kiln has been constructed in this country. Prof. Carpenter attributes the construction of kilns between 60 and 100 feet in length during the years 1893-1894 to the general information but imperfect knowledge of the long kilns of the Edison invention, then prevailing in the art, according to which he and other cement engineers acted at that time. There is no evidence of the construction of a dry-process kiln over 60 feet in length from the date of the Edison invention, January, 1890, to 1904..... 303

Today 60 foot kilns either form part of the scrap-heap or have been used to form parts of Edison long kilns, or, where still retained in use with Edison long kilns, are used only when the demand for cement cannot be supplied by the long kilns ..... 303

The great efficiency and economy of the Edison long kiln are not due to any change in the preparation of the raw material, since the crushing and grinding machinery used today is practically what it was 15 years ago. .... 304

The novelty of Mr. Edison's long kiln was such that for several years it met not only with opposition but with ridicule. It was laughed at. Those skilled in the art could see no engineering reason for it, and said that it would result in commercial failure and "be a monument to Mr. Edison's folly in solving practical engineering problems." Mr. Bentley asks, "Why did they laugh?" He shows that there was nothing to laugh at, if Mr. Carter's contention, that the Edison 150 foot kiln "represents a mere carrying forward of the old practice along natural lines of progress," be correct, and that nobody laughed when others constructed Edison kilns 250 feet or more in length. Prof. Carpenter, Dr. Kiefer, Mr. Hawk, Mr. Hartner, Mr. Maloney and Mr. Mason and defendant's witnesses, Mr. Super, all testify to the opposition and ridicule with which the announcement of Mr. Edison's great invention was met..... 304

The original specification filed by Mr. Edison described the Edison long kiln precisely as it is described in the patent in suit. The drawings and the description thereof in the original specification are identical with the drawings and the description thereof in the patent. The original specification also described the mode of operation of the Edison long kiln precisely as it is described in the patent in suit. Although the patent in suit amplifies the explanation of the principles according to which the process takes place in the Edison long kiln, nevertheless the explanation of those principles was full and complete in the original specification, including the elimination of carbon dioxide from the material in the long calcining zone by the absorption of heat from the gases and products of combustion..... 305

A comparison of the original specification with that of the patent in suit and the testimony of Mr. Bentley show that the description and claims of the patent form no departure whatever from the description and claims originally filed. Defendant's apparent contention to the contrary is without any basis, is not supported by any testimony, is disproved by Mr. Bentley and was not made until after complainant's rebuttal proofs had been closed 305

The decided cases show that any contention to the effect that the description and claims of the Edison patent in suit constitute, to any extent, a departure from the original specification, is preposterous..... 309

An inventor has a right to change his description and claims, so long as he does not change the structure of his device or invention, even though he makes the change with reference to another patent which has been applied for and issued while his application was pending..... 309

If an applicant discovers new uses to which his invention may be put, or discerns the principles thereof more clearly, while his application is pending, he may amend his description and claims and secure a valid patent, if he does not change the structure of his device, even though

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the annexed description and claims reproduce his original conception, and substitute a new conception of the functions or mode of operation of the device, the reason being that the invention consists of the device.....	209
When an invention consists of a machine, article or device, a patent therefor is valid, even though the inventor does not understand, or incorrectly describes, the principle of its operation.....	209
Even if a patentee at the time of making his application does not know of an advantage secured by his device, or knowing fails to express it, he is nevertheless entitled to every use and advantage to which his device can be applied, if he has sufficiently described and claimed the device itself.....	211
As appears from the cases cited in support of the foregoing points, an amendment, requiring no oath of verification, was filed. Assuming that such an amendment was filed the presumption is that a proper oath was required and filed.....	211
Defendant has introduced or attempted to introduce, under objection, much hearsay evidence. Attention is here directed to the following incompetent, hearsay published statements: (1) As to variation in output with length of kiln, shown by Mr. Mason to be incorrect; (2) as to the growth of a patent-holding company; (3) as to Prof. Carpenter's 1907 discussion of Soper's paper, shown by Prof. Carpenter to be inaccurate; and (4) Becker's tabular Portland cement compositions, shown to be incorrect (D. Exh. pp. 251, 252, 255, 260); also to (5) defendant's attempt to introduce, upon cross examination of Mr. Mallory, incompetent, hearsay writings, not made by him, from books or records of the Edison Portland Cement Co., not a party to this suit. Attention has heretofore been called to the hearsay character of the Soper and Gussner tables of analyses and the Soper drawings based thereon (supra, pp. 250-261); also to the hearsay character of all the statements contained in the several patents and publications adduced by defendant (supra, pp. 202-	

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204). Mr. Mallory produced all documents of which he had knowledge, and to which he referred to refresh his recollection, and they are in evidence.....	211
Defendant infringes claims 1, 2, 5, 6, 7, 8 and 11 of the patent in suit. Infringement is not, and cannot be, controverted. The file-wrapper and the decided cases show that complainants are entitled to the full benefit of the claims, as allowed. Each claim is a proper claim, within the authorities, for a machine or apparatus.....	215
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Citation of pages in this brief wherein the essential features of defendant's 60 foot kilns are set forth.....	221
Citation of cases showing defendant's infringement.....	221
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The enlargement of a reservoir in apparatus for mixing molten pig metal, a change in size (Carnegie Steel Co. v. Cambria Iron Co., 188 U. S. 430, 435, 436, 437, 442, 443); the employment of a filament, instead of a rod, of carbon, in the vacuum of an electric light bulb, a decrease in diameter from 1/32nd to 1/64th of an inch (Edison Co. v. United States Co., 42 Fed. 360, 363-364 at Fed. 464, 462-463); a definite and proper length of the wire on the primary coil of a transformer, instead of an improper length previously used, a change in length (Westinghouse Co. v. Butter, 184 Fed. 838, 839-841, citing 133 Fed. 899 and other like cases); the enlargement of revolving, crushing rolls to such an extent that the revolution of the heavy rolls accumulates kinetic energy sufficient to break rock periodically delivered to the rolls, an increase in size (Edison v. Allee-Chalmers Co., 151 Fed. 871); a simple change in a loom that enabled the weaver to drive it to its utmost capacity and thereby	

produce 60, instead of 40, yards a day (Loom Co. v. Higgins, 105 U. S. 580, 586, 64-65); and many other inventions founded upon like changes, which have appeared to be very simple after they had been made, have been held to be patentable inventions of great merit because of the new mode of operation or improved results secured thereby, and in no sense matters of mere enlargement or degree..... 322

"To accomplish a new and useful result within the meaning of the patent law, it is not necessary that a result before unknown should be brought about, but it is sufficient if an old result is accomplished in a new and more effective way. If the value and effectiveness of a machine are substantially increased, the new combination of old elements, which does it, is patentable"..... 324

Mr. Bentley shows that novelty occurs in unexpected ways; that there is no hard and fast rule as to the nature or extent of the change necessary to constitute patentable invention; and that, as here, a change in dimensions may involve patentable invention as well as any other kind of change. He shows that there was nothing in the nature of the steam-burning process that would naturally have indicated that an increase in output or a decrease in coal consumption could be obtained by any change in the dimensions of the standard 60 foot and other kilns of the prior art and points out that defendant's expert, Mr. Carter, makes no showing whatever that the prior art understood or expected or thought that such results could be obtained by such a change. Mr. Carter's argument, based upon changes in the size of locomotive and the like, he says, are absolutely irrelevant, since such cases must stand on its own merits and the evidence shows that the Edison invention was beyond the comprehension or understanding of the prior art"..... 325

The rule in regard to a mere change in degree has, as shown, no application to the Edison invention. That rule, as the cases show, applies only where there is a mere carrying forward, in an obvious manner, of an idea or thought that existed in the prior art. If there be a new idea, distinct from the conception which preceded it and if that idea be an improvement, it may be turned upon an old invention and be patentable. The same cases show that, if the gist of an invention be in the dimensions of a device and those dimensions be defined, the invention is patentable..... 326

If, as contended by defendant, the Edison invention was obvious, why did defendant install 60 foot kilns in 1860-1862 and wait till about 1866, when the Edison invention had become known and accepted in the art, before it doubled up its 60 foot kilns, thereby making Edison 120 foot kilns with which defendant increased the output of each kiln from 175 or 200 barrels to 600 barrels per day and decreased the fuel consumption from 120 pounds to 70 or 75 pounds of coal per barrel of oiliner produced? And why did the California Co., with Duryea in its employ, install a 60 foot kiln at Colton in 1867, after having tried a 72 foot kiln in 1864, and wait till 1868 before installing Edison 120 foot kilns under the advice of Prof. Carpenter? Although defendant and others were operating 600 foot kilns and, therefore, had all the means, ready at hand, for constructing Edison kilns of the proper length and internal diameter and for securing therewith the great efficiency and economy of the Edison invention, nevertheless they failed, without exception, to make the change and continued to install 60 foot kilns until Mr. Edison had practically demonstrated the success of his invention. It is inconceivable that cement manufacturers should have continued to install and operate 60 foot kilns which wasted enormous quantities of coal and produced a very small output of inferior quality at great cost, if the Edison invention was obvious..... 328

It is sufficient evidence of invention that a device is so far different from the prior art as to receive the approval of the Patent Office, possess utility and go into use; for in such cases the presumption of invention arising from the grant of the patent is fortified by the presumption of invention arising from the utility and use of the invention, especially where, as here, the use becomes practically exclusive (Diamond Rubber Co. v. Consolidated Tire Co., 220 U. S. 428)..... 329

Other authorities show that the invention described and claimed in the Edison patent in suit was not anticipated and is a patentable invention..... 330

(2) Apart from the presumption of novelty that always attends the granting of a patent, the law is that, if the question of invention be in doubt, the practical success of the device and the fact that it has displaced similar devices in previous use for the same purpose is sufficient evidence of invention to sustain the patent..... 330



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(2) The simplicity of a device may, in itself, amount to invention. Many of the most useful inventions depend upon simple changes .....	331
(3) A slight modification or re-arrangement of the elements of an old device whereby the efficiency or economy of the device is improved, though no original result be accomplished, is invention sufficient to form the basis of a patent .....	332
(4) The question of invention is to be determined by the results accomplished, not by an analysis of the means by which the results are attained .....	332
(5) The fact that an invention brings to success what prior inventors had tried and only partially accomplished is evidence of invention that will sustain a patent .....	332
(6) In a long developed or crowded art the production of an improved device that goes into general use, displacing similar devices previously used for like purposes, is persuasive evidence of invention .....	333
(7) An invention is not to be forfeited by the wisdom that comes after the event .....	333
(8) In order to anticipate, the law requires not conjecture, but certainty .....	333
(9) A patent cannot be anticipated by selecting parts from several prior patents .....	333
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(13) An abandoned experiment is not an anticipation; nor is an unsuccessful, though somewhat similar device .....	334

(14) Neither anticipation nor lack of infringement is established by proof that one or more elements of a patented combination may be found in the prior art. A combination is a unit and a claim therefor is valid although all of its elements be old .....	334
(15) The burden of proving anticipation rests heavily upon the defendants and every reasonable doubt should be resolved against them .....	334
(16) Simply raising a doubt as to whether a skilled mechanic would not have seen the means adopted in a patented device, does not rebut the presumption of invention arising from the grant of the patent .....	335
(17) A patent implies novelty and invention, and the burden of proof rests upon one attacking the validity to establish anticipation or lack of invention beyond a reasonable doubt .....	335
(18) The decided cases show that it is presumption, even gross presumption, for defendant to contend, in view of the state of the prior art as shown by the evidence, that the Edison invention was obvious .....	335
(19) A patent for a successful device cannot be anticipated by a mere prior patent for an unsuccessful or abandoned device, even though the prior patent disclosed the theory of the successful device .....	335
(20) A prior patent or publication is not an anticipation of a later patented invention unless the invention described in it is identical in all respects, including the same stage of development and the same idea of means .....	335
(21) Prophetic suggestions, in foreign patents and publications, of what may be done, when no one has ever tested those suggestions, are not sufficient to anticipate a United States patent .....	335
(22) A patentee is entitled to have his patent considered with reference to an advantage over the prior art necessarily secured by the device as described, even though such advantage is not specifically claimed or referred to .....	335
(23) A prior device, which does not operate on the same principle or was not designed to perform the same functions, cannot be an anticipation .....	335

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(24) A patent is not anticipated because an expert, having the patent before him, interprets the prior art in the light of the patent, as does Mr. Carter in the case at bar .....	336
(25) A patent cannot be anticipated by an accidental occurrence in the prior art, without recognition or understanding and without disclosure to the public.....	336
(26) At the date of the Edison invention there was no kiln in existence having a length of over 60 feet, except, possibly, the inefficient 73 foot Colton kiln. The decided cases show that the statements of the patent and of the original specification in this respect are to be understood in accordance with the facts.....	337
(27) A new process may be invented or discovered, which may require the use of a newly invented machine. In such case both the process and the machine are patentable .....	337
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## LEGAL DEPARTMENT RECORDS MOTION PICTURES

This material consists of correspondence, court documents, and other items relating to patent interference proceedings, infringement suits, and other legal actions involving motion pictures. Included are documents pertaining to infringements of the patents of other inventors, copyright infringements, the use of trade names, color photography, and the development of a waterproof coating for motion picture films. Also included are items from five patent interference cases involving automatic shutters used in film projectors for fire safety. In addition, there are case files for several suits brought against the Motion Picture Patents Co., the General Film Co., and their licensees by independent motion picture exhibitors and by the federal government. Most of the selected items cover the years 1899-1910, but some of the correspondence folders and case files extend into the 1910s.

Less than 10 percent of the documents have been selected. The selected items reflect Edison's personal involvement in legal matters, detail experimental work done by Edison or his assistants, or broadly pertain to matters of corporate organization and stratagems employed against competitors. The documents have been arranged in the following order:

### Correspondence

- Bronx Studio

- Color Photography

  - Brasseur, Charles L.

  - Davidson, William N. L.

  - Patents [not selected]

  - Powrie, John H.

- Copyright Photographs

- Feed Mechanism

- Foreign Films

- Lubin, Sigmund

- Mutoscope and Related Patents

- National Waterproof Film Company

**Interference Proceedings**

*Aiken v. Moore and Armstrong* (No. 27,476)  
*Platt v. Morris and Leveen v. Aiken v. Moore and Armstrong* (No. 27,477)  
*Oertly v. Aiken v. Power* (No. 27, 479)  
*Oertly v. Aiken v. Schneider v. Platt* (No. 27,480)  
*Currie v. Moore and Armstrong* (No. 30,181)

**Case Files**

*American Mutoscope & Biograph Company v. Edison Manufacturing Company*  
*Armat Moving Picture Company v. Edison Manufacturing Company*  
*Thomas A. Edison v. Sigmund Lubin*  
*Greater New York Film Rental Company v. Motion Picture Patents Company et al.; Greater New York Film Rental Company v. General Film Company et al.*  
*Motion Picture Patents Company v. Independent Moving Picture Company of America*  
*Motion Picture Patents Company v. Universal Film Manufacturing Company et al.; Jesse Isidor Straus et al. v. Victor Talking Machine Company*  
*Richard F. Outcault v. Edison Manufacturing Company and Percival L. Waters*  
**Triple Damage Suits**  
*United States of America v. Motion Picture Patents Company et al.*  
*James H. White and John R. Schermerhorn v. Percival L. Waters*

**LEGAL DEPARTMENT RECORDS  
MOTION PICTURES - CORRESPONDENCE**

These folders contain correspondence and other documents relating to legal matters involving motion pictures. The selected documents cover the period 1904-1915. Among the correspondents are Edison, Frank L. Dyer, Delos Holden, George F. Scull, and other members of Edison's legal staff. Much of the correspondence concerns color photography. Included are letters regarding the work of Charles L. Brasseur, William N. Lascelles Davidson, William Friese-Greene, John H. Powrie, and Florence M. Warner. Other documents pertain to the National Waterproof Film Co., which developed a protective coating that was used on films manufactured by the Edison Manufacturing Co. and other licensees of the Motion Picture Patents Co. Also included are items relating to copyright matters, possible infringements of the patents of other inventors, the use of trade names, and Edison's motion picture studio in the Bronx.

#### Bronx Studio

This folder contains correspondence and other documents pertaining to the acquisition of additional property for Edison's motion picture studio in the Bronx. The selected items cover the years 1904-1907. Included are letters from William Pelzer of the Legal Department to attorney Frank E. Bradley of New York, along with indentures and agreements relating to the purchase.

#### Color Photography - Brasseur, Charles L.

This folder contains correspondence, drawings, and other documents pertaining to the U.S. patent applications of Charles L. Brasseur and to his work with the Edison Manufacturing Co. on color photography. The selected documents are from 1908. Included are letters by Brasseur, Frank L. Dyer of the Legal Department, and William E. Gilmore of the Edison Manufacturing Co.

#### Color Photography - Davidson, William N. L.

This folder contains correspondence and other documents relating mainly to color processes invented by William N. Lascelles Davidson of Brighton, England. The selected documents are from 1905. Included are letters by Davidson; John R. Schermerhorn, assistant general manager of the Edison Manufacturing Co.; and James H. White, managing director of the Edison Manufacturing Co., Ltd. Some of the documents pertain to Davidson's collaboration with William Friese-Greene on color animation.

#### Color Photography - Patents [not selected]

This folder contains approximately 140 U.S. patents (1874-1909) dealing mainly with color photographic film, pictures, apparatus, and processes. Most of the patents were issued to American inventors, including Joseph T. Clarke, Edward R. Hewitt, Rudolf Isenmann, Frederic E. Ives, and James W. McDonough. Also included are patents issued to European inventors, such as Louis D. Du Hauron, Jean M. Frachebourg, Louis A. Garchey, Annibal L  g  , Victor Mathieu, and L  on Vidal of France; William N. Lascelles Davidson and William Henry England of Great Britain; and Karl Kieser and Gustav Selle of Germany.

#### Color Photography - Powrie, John H.

This folder contains correspondence and other documents, including notes, drawings, patents, patent assignments, affidavits, and agreements. The selected items cover the period 1909-1915. Most of the correspondence is between Frank L. Dyer of the Legal Department and patent holders John H. Powrie and Florence M. Warner. There are also letters to and from Edison, along with other items bearing his marginalia. The documents deal mainly with Powrie's heliographic screens and related photographic processes, including an automatic film-developing apparatus. Many letters relate to his experiments in Paris and to tests of his film samples by Edison's staff. One letter in Edison's hand concerns Powrie's use of the Galvanometer Room at the West Orange laboratory; others pertain to the commercial value of Powrie's dry plates and his relations with the Path   Fr  res and Lumi  re companies. Also included are letters regarding the cost and discontinuance of Powrie's experimental work at West Orange.

Some of the correspondence concerns Willard C. Greene, a photographic experimenter in the West Orange laboratory who considered Warner-Powrie film impractical for Edison's kinoscope; Charles Brasseur, another inventor working on color photography; and Montgomery Waddell, a former assistant to Edison. Other items relate to the products of the Lumi  re Co., including autochrome and panchromatic plates, and to consultations with Path   Fr  res, including a letter by engineer Charles B  r  y regarding emulsification machines. There is also correspondence referring to the possible construction of a new film plant, as well as a letter of introduction for William C. Anderson of Detroit, a manufacturer of electric vehicles.

#### Copyright Photographs

This folder contains correspondence between Frank L. Dyer of the Legal Department and Thorvald Solberg, register of copyrights at the Library of Congress, regarding copyright applications for motion pictures scenes. The letters are from 1905 and relate to an application for a film entitled *Poor Algy*.

#### Feed Mechanism

The one selected item in this folder is a letter from 1905 by Frank L. Dyer of the Legal Department. It concerns an exhibiting machine designed by Edwin S. Porter and its possible infringement of a patent issued to Thomas Armat in 1901.

#### Foreign Films

This folder contains correspondence and other documents relating to copyright issues and kinetoscope films purchased in Europe for duplication in the United States. The documents are from 1904. Most of the letters are written by Frank L. Dyer of the Legal Department and patent attorneys Bacon & Milans of Washington, D.C. Some of the items contain descriptions of specific films from the Warwick Trading Co., Ltd., of London and Pathé Frères. Also included is correspondence concerning a suit filed by the American Mutoscope & Biograph Co. against the Edison Manufacturing Co.

#### Lubin, Sigmund

This folder contains correspondence and other documents relating primarily to the use of the trade names "Universal" and "Exhibition" on projecting machines produced by Philadelphia manufacturer Sigmund Lubin. The selected items are from 1904.

#### Mutoscope and Related Patents

This folder contains correspondence, patents, drawings, and other documents relating to the kinetoscope, the mutoscope, and additional machines for filming and exhibiting motion pictures. The one selected item is a 1905 letter from Frank L. Dyer to Alex T. Moore, manager of the Kinetoscope Department of the Edison Manufacturing Co. The letter concerns the company's plans to manufacture "a moving picture exhibiting machine similar to the mutoscope for use in combination with the phonograph" and possible infringements of the patents of other inventors.

#### National Waterproof Film Company

This folder contains correspondence, agreements, and other documents relating to a waterproof, protective coating used on films manufactured by the Edison Manufacturing Co. and other licensees of the Motion Picture Patents Co. The selected items cover the years 1909-1910. Most of the correspondence is by Frederick K. Babson, Walter A. Daniels, and Frederick B. Thompson of the National Waterproof Film Co. and by George F. Scull of the Edison Manufacturing Co. and Motion Pictures Patent Co. Some of the documents relate to meetings with George Eastman of the Eastman Kodak Co., Jeremiah J. Kennedy of the American Mutoscope & Biograph Co. and General Film Co., William N. Selig of the Selig Polyscope Co., and George K. Spoor of the Essanay Film Manufacturing Co.

**Legal Department Records  
Motion Pictures - Correspondence**

**Bronx Studio**

This folder contains correspondence and other documents pertaining to the acquisition of additional property for Edison's motion picture studio in the Bronx. The selected items cover the years 1904-1907. Included are letters from William Pelzer of the Legal Department to attorney Frank E. Bradley of New York, along with indentures and agreements relating to the purchase.

Approximately 20 percent of the documents have been selected.



John Holloran and others  
to  
Frederick P. Fox

DEED

Dated December 15, 1904.

Land affected by the within  
instrument lies in Sec. 12,  
Block 3279 on Land Map of  
City of New York.

THIS INDENTURE made the 14th day of December in the year one thousand nine hundred and four, between JOHN HALLORAN of the City of New York and MARY A. HOLMORAN, his wife, parties of the first part, THE FARMERS LOAN AND TRUST COMPANY AS EXECUTOR OF AND TRUSTEE UNDER THE LAST WILL AND TESTAMENT OF ELWARD SMITH, DECEASED, party of the second part, CHARLES D. PURROY, unmarried, of Ratontown, New Jersey, party of the third part, and JOHN PURROY MITCHELL, unmarried, of the City of New York, party of the fourth part, and FREDERICK P. FOX of the City of New York, party of the fifth part.

WHEREAS, the premises hereinafter described are owned as follows: viz: one undivided third part by the said John Halloran, one of the parties of the first part; one undivided third part by the said The Farmers Loan and Trust Company as Executor of and Trustee under the last will and testament of Elward Smith, Deceased, party of the second part; one undivided sixth part by the said Charles D. Purroy, party of the third part; and one undivided sixth part by the said John Purroy Mitchell, party of the fourth part, and

WHEREAS the parties of the first, second, third and fourth parts have agreed to sell, and the party of the fifth part has agreed to purchase, the premises hereinafter described for the sum of Fifty-three thousand five hundred Dollars (\$53500.00),

NOW THEREFORE, this Indenture Witnesseth, That the said parties of the first, second, third and fourth parts for and in consideration of the sum of \$53500.00 paid by the said party of the fifth part and apportioned among the said parties of the first, second, third and fourth parts in accordance with their respective interests as aforesaid (The said party of the second part, The Farmers Loan and Trust Company as Executor of and Trustee under the last will and testament of Elward Smith, Deceased, being paid the sum

of \$17,833.34) do hereby grant, bargain, sell, and release unto the said party of the fifth part, his heirs and assigns forever, all their said respective right, title and interest (being together the entire right, title and interest) of, in and to all that certain plot, piece or parcel of land, situate, lying and being in the Borough of the Bronx, City of New York, bounded and described as follows: BEGINNING at the corner formed by the intersection of the Westerly side of Webster Avenue with the Northerly side of Oliver Place, and running thence northwardly along the said westerly side of Webster Avenue two hundred feet and sixty one-hundredths of a foot (200.60), more or less, to the corner formed by the intersection of the said Westerly side of Webster Avenue with the Southerly side of East 199th Street (formerly Walton Street); thence running Westwardly along the Southerly side of East 199th St. Two hundred and thirty feet and forty-four one hundredths of a foot (230.44), more or less, to the corner formed by the intersection of said Southerly side of East 199th Street with the Easterly side of Decatur Avenue; thence running southwardly along the said Easterly side of Decatur Avenue two hundred and one feet and thirty-one one hundredths of a foot (201.31), more or less, to the corner formed by the intersection of the Easterly side of Decatur Avenue with the Northerly side of Oliver Place; and thence running Eastwardly along the Northerly side of Oliver Place Two hundred and twenty-three feet and three one hundredths of a foot (223.03), more or less, to the northwesterly corner of Webster Avenue and Oliver Place, the point or place of beginning.

TOGETHER with the appurtenances and all the estate and rights of the said parties of the first, third and fourth parts in and to the said premises; and also all the estate therein which the said Elward Smith, deceased, had at the time of his decease and which the said party of the second part has or has power to convey or dispose of, whether individually or

by virtue of said will or otherwise and this deed being executed by The Farmers Loan and Trust Company as Executor of and Trustee under the last will and testament of Elward Smith, deceased, by virtue of the power and authority to it given in and by the said last will and testament of Elward Smith, deceased.

TO HAVE AND TO HOLD the said premises unto the party of the fifth part, his heirs and assigns forever.

And the said John Holloran, Charles D. Purroy and John Purroy Mitchell, but each only as to his own respective interest in said premises, and to no further or greater extent, do covenant with the said party of the fifth part as follows:-

FIRST: That they, the said John Hollaran, Charles D. Purroy and John Purroy Mitchell are seized of the said premises in fee simple to the extent of their respective interests in the same as hereinbefore recited and that they have to such extent a good right to convey the same.

SECOND: That the party of the fifth part shall quietly enjoy said premises.

THIRD: That the said premises are free from encumbrances.

FOURTH: That they, the said John Holloran, Charles D. Purroy and John Purroy Mitchell, will forever warrant the title to their respective interests in the said premises as hereinbefore recited.

And the said The Farmers Loan and Trust Company as Executor of and Trustee under the last will and testament of Elward Smith, Deceased, does hereby covenant with the said party of the fifth part that it The Farmers Loan and Trust Company as Executor of and Trustee Under The last will and testament of Elward Smith, deceased, has not done or suffered anything whereby its interest in the said premises as hereinbefore recited has been incumbered in any way whatever.

IN WITNESS WHEREOF, the parties of the first, third and fourth parts have hereunto set their hands and seals and the party of the second part has caused these presents to be executed on its behalf the day and year as above written.

In Presence of:

JOHN HOLLORAN (SEAL)  
MARY A. HOLLORAN (SEAL)

W. Bruce Caleb as  
to Charles D. Purroy

THE FARMERS LOAN AND TRUST  
COMPANY AS EXECUTOR OF AND TRUSTEE  
UNDER THE LAST WILL AND TESTAMENT  
OF EDWARD SMITH, DECEASED,  
By E. S. MARSTON, President

Wm. F. Burrough as to  
John Holloran and Mary  
Holloran

(SEAL)  
Attest

CHARLES D. PURROY (SEAL)

-----  
Sec'y.

JOHN PURROY MITCHELL (SEAL)

STATE OF NEW YORK }  
COUNTY OF NEW YORK } ss.

On this 21st day of December in the year of our Lord one thousand nine hundred and four, before me personally came and appeared John Holloran and Mary A. Holloran, his wife, to me known and known to me to be two of the individuals described in and who executed the within instrument and they severally acknowledged to me that they executed the same.

Wm. F. Burrough,  
Commissioner of Deeds,  
New York City.

STATE OF NEW YORK }  
COUNTY OF NEW YORK } ss:

On the 22nd day of December in the year one thousand nine hundred and four before me personally came Edwin S. Marston to me known, who being by me duly sworn, did depose and say that he resided in the City of New York; that he was the president of The Farmers Loan and Trust Company, the corporation described in and which executed the above instrument; that he knew the seal of said corporation and that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

(SEAL)

Wm. B. Cardozo,  
Notary Public No. 23,  
New York County.

STATE OF NEW YORK }  
COUNTY OF NEW YORK } ss.

On this 16th day of December in the year of our Lord one thousand nine hundred and four, before me personally came and appeared Charles D. Purroy, to me known and known to me to be one of the individuals described in and who executed the within instrument and he said to me that he executed the same.

E. V. Daly,  
Commissioner of Deeds,  
City of New York

STATE OF NEW YORK    }  
                          } SS.  
COUNTY OF NEW YORK    }

On this 22nd day of December in the year of our Lord  
one thousand nine hundred and four before me personally came  
John Furroy Mitchell, to me known, and known to me to be one of  
the individuals described in and who executed the within  
instrument and he acknowledged to me that he executed the same.

(SEAL)

Wm. B. Cardozo,  
Notary Public, No. 23,  
New York County.

Recorded in the office of the Register of the  
County of New York on this 23rd day of  
December, A.D. 1904 at 2 o'clock 35 Min. P.M.  
in Block Series (Conveyances) Section 12  
Lib. 19, Page 241, and indexed under Block  
No. 3279 on the Land Map of the City of  
New York.

Witness my hand and official seal

-----  
Register.

AGREEMENT, made this sixth day of June, 1905. 190

BETWEEN Frederick P. Fox, of New York City, Borough of Bronx, N. Y.

herein designated as the party of the first part, and

ALEXANDER T. MOORE of New York City,

Borough of Manhattan, N. Y.

herein designated as the party of the second part,

WITNESSETH, That the party of the first part agrees to sell and convey, and the party of the second part agrees to purchase all that lot or parcel of land, in the Borough of Bronx, City of New York, State of New York.

theroon, described as follows: Beginning at a point formed by the intersection of the easterly side of Deatur Avenue with the northerly side of Oliver Place, running thence northwardly along the said easterly side of Deatur Avenue one hundred (100) feet, thence eastwardly and at right angles with the said easterly side of Deatur Avenue, one hundred (100) feet, thence southwardly and parallel with the said easterly side of Deatur Avenue, one hundred (100) feet to the northerly side of Oliver Place and thence westwardly and along the said northerly side of Oliver Place to the point or place of beginning.

No. 116191

AND

# Contract for Property

Copied by  
Casting Dept.

The Lawyers' Title Insurance Company  
of New York.

Capital and Surplus, \$8,000,000  
Permanent Guarantee Fund, \$2,625,000

## OFFICES

57 & 59 Liberty St., Borough of Manhattan.  
88 Court Street, Borough of Brooklyn.

EXAMINES AND INSURES TITLES TO REAL ESTATE,  
THIS ASSURED SELECTING COUNSEL IF HE DESIRES.

Indemnifies the assured against loss by reason of defects or  
incompleteness of title, and defends in the surety against all  
suits brought on a claim of title or ownership prior to the  
policy.

The price is           Fifteen Thousand Dollars (\$15,000.)

Dollars,

payable as follows:

Five Hundred (\$500.00) Dollars

Dollars on the signing of this contract, the receipt whereof is hereby acknowledged.

Fourteen Thousand Five Hundred (\$14,500.00) Dollars.

Dollars in cash on the delivery of the deed as hereinafter provided.

AND THE SAID party of the first part, on receiving such payment

at the time and in the manner above-mentioned, shall at the expense of the party of the first part execute, acknowledge and deliver, to the said party of the second part, or the assigns of the party of the second part, a proper deed containing the usual full covenants and warranty for the conveying and assuring to the party of the second part, or the assigns of the party of the second part, the fee simple of the said premises free from all encumbrance ~~except as hereinbefore~~ The said Deed shall be delivered at the

New York City,  
Office of Frank E. Bradley, 290 Broadway, on the 20th day of

June

1905 at 12 o'clock noon.



The chandeliers, gas fixtures, ranges, heating and hot water apparatus, water closets, bath tubs and other plumbing now on said premises are to be included in this sale and in the warranty above set forth.

The rents of the said premises, insurance premiums, and interest on mortgages, if any, shall be adjusted, apportioned and allowed up to the day of taking title.

The risk of loss or damage to said premises by fire until the delivery of said deed is assumed by the party of the first part. IT IS UNDERSTOOD that the stipulations aforesaid are to apply to and bind the heirs, executors, administrators and assigns of the respective parties.

The party of the first part agrees that  
is the broker who has brought about this sale, and agrees to pay said broker his commission therefor.

WITNESS the hands and seals of the above parties.

Signed, sealed and delivered in the presence of

Frank E. Mulvey *[Signature]* *[Signature]* *[Signature]* L. S.

*Alexander D. Moore* L. S.

#### AT THE CLOSING OF THIS TITLE

##### THE SELLER

Should produce all insurance policies, and duplicates, if the same are in his possession, or a memorandum thereof, if held by others; also produce the tax and water receipts of the current year and any leases, deeds, or agreements.

If there is a water meter on the premises, it should be read and bill therefor produced.

If there is a mortgage on the premises to be conveyed, the receipts should be produced showing to what date the interest has been paid, and if the principal has been reduced, showing that fact.

##### THE PURCHASER

Should be prepared with money or a certified check drawn to his own order. The check may be certified for an approximate amount and money may be provided for the balance of the settlement.

#### THE LAWYERS' TITLE INSURANCE COMPANY OF NEW YORK,

##### OFFICES:

27 & 29 Liberty Street, Borough of Manhattan.  
2804 Third Avenue, Borough of the Bronx.  
N. E. Cor. 7th Street and Columbus Avenue, Borough of Manhattan.  
83, 40, 42 & 44 Court Street, Borough of Brooklyn.  
White Plains, Westchester County.  
Jamaica, Queens County.  
Haverhill, Suffolk County.

EXAMINES AND INSURES TITLES TO REAL ESTATE, THE ASSURED SELECTING COUNSEL IF HE DESIRES.

[INCOMPLETE]

THOMAS A. EDISON,  
PRESIDENT

W. C. GILMORE,  
VICE PRESIDENT & GENERAL MANAGER

J. S. GILBERTSON, JR.,  
TREASURER

J. K. RANDOLPH,  
TELEGRAMS

A. WESTEE,  
SECRETARY



**EDISON MANUFACTURING CO.**

MAIN OFFICE AND FACTORY  
ORANGE, N. J.

EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.

10 FIFTH AVENUE, NEW YORK.  
304 WABASH AVENUE, CHICAGO.

CABLE ADDRESS  
"KURILIAN, NEW YORK"

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE DETAILS

ADDRESS YOUR REPLY TO

W. P.,

*New York,* Oct. 1st, 1907.

Mr. Frank E. Bradley,  
Dun Building, 290 Broadway,  
New York, N. Y.,

Dear Sir:

I enclose herewith the contract for the purchase of a 20 foot strip adjoining the property purchased by us some time ago for the Edison Studio.

In the sketch which I enclose the 100 foot square section indicates the original purchase. And in order to protect the Studio from the erection of a tall building which might tend to shut out our light, we contracted for the space 20 ft. wide adjoining our property on Oliver Place, In looking into the purchase of this property, we discovered that through the sale of the lots adjoining our property on the north, a strip measuring 1.31 ft., and decreasing in width in the eastern direction was entirely overlooked. In making the bargain for the 20 ft. section to the east of our property, I got the owners to throw in this narrow strip on the north, so as to protect us against any complications that might arise as to the correct lines. Therefore, what I expect to obtain by the contract which I enclose, is the L-shaped strip as indicated in the enclosed sketch.



[ENCLOSURE]

No. 148613

Fredrick P. Fox,

AND

Mina M. Edison.

# CONTRACT

JAMES W. CAIRNS,  
COUNSELLOR AT LAW,  
By William Street,  
New York City. 4966/pt

We have examined more than 100,000 titles. If we examine your title, you get the benefit of all we have learned. Our charges are moderate and fixed. Low rates where we have previously examined the title. Apply at any office.

## Title Guarantee and Trust Company.

Capital and Surplus, \$10,000,000.  
178 Broadway, New York.  
170 Remsen Street, Brooklyn.  
547 Fifth Avenue, New York.  
50 Jackson Avenue, L. I. City.  
137 West 125th Street, Harlem.  
354 Fulton Street, Jamaica.  
609 East 140th St., & W. cor. 84 Ave., Breez.

MANUFACTURERS BRANCH,  
100 Montague Street, Brooklyn.

Copied to Mr. Fox  
Bradley, 240 Broadway

AGREEMENT, made this third day of October, 1907.

between Fredrick P. Fox of the County and State of New York, party of the first part, hereinafter described as the seller, and

Mina M. Edison, of Clayton in the State of New Jersey, party of the second part, hereinafter described as the purchaser,

WITNESSETH, That the seller agrees to sell and convey, and the purchaser agrees to purchase all that lot of land, with the buildings and improvements thereon, in the

County of the County, City, County and State of New York

described as follows: Beginning at a point in the northern line of Oliver Place distant 100 feet easterly from the corner formed by the intersection of said northern line of Oliver Place with the easterly line of Beacott Avenue and running thence northwesterly parallel or nearly so with said easterly line of Beacott Avenue and along the easterly line of land heretofore conveyed by the party of the first part hereto unto the party of the second part hereto, 100 feet; thence westerly parallel or nearly so with said northern line of Oliver Place and along the northern line of said land heretofore conveyed by the party of the first part hereto unto said party of the second part hereto, 100 feet more or less to said easterly line of Beacott Avenue; thence northwesterly and along said easterly line of Beacott Avenue one foot and 31 one hundredths of a foot, be the same more or less to the northern line of land heretofore conveyed by the party of the first part hereto unto Amalia Park; thence easterly, in a straight line parallel or nearly so with said northern line of Oliver Place and for the distance of 100 feet thence along said northern line of land to convey to Amalia Park one hundred and twenty feet; thence northwesterly, parallel or nearly so with said easterly line of Beacott Avenue one hundred feet and 46 one hundredths of a foot, be the same more or less to said northern line of Oliver Place and thence westerly and along said northern line of Oliver Place twenty feet to the point of beginning.

RECORDED IN 278

[ENCLOSURE]

The price is

Four thousand \_\_\_\_\_ Dollars, payable as follows:

Five hundred \_\_\_\_\_

Dollars on the signing of this contract, the receipt of which is hereby acknowledged.

Three thousand five hundred \_\_\_\_\_

Dollars in cash on the delivery of the deed as hereinafter provided.

All fixtures and personal property appurtenant to or used in connection with said premises are included in this sale.

The deed shall be delivered upon the receipt of said payments at the office of

Richard Fox & Co. 22793 Broadway, New York City  
on the 9<sup>th</sup> day of October 1907 at 12 o'clock, noon.

The seller hereby declares that the sum paid on the execution of this contract, together with all other sums which the purchaser may pay on account of the purchase price before the delivery of the deed hereunder, and the reasonable expense of examination of the title to said premises are a lien thereon, and may be enforced by a sale of the seller's interest in said premises.

The deed shall be a full covenant warranty deed in proper form, and shall be duly executed and acknowledged by the seller, at the seller's expense, to convey to the purchaser, or the purchaser's assigns, the absolute fee of the above premises, free of all incumbrances, except as above stated.

All instruments to be given hereunder are to be in the statutory short form.

Rents and interest on mortgage,

if any, are to be apportioned.

The risk of loss or damage to said premises by fire until the delivery of the deed is assumed by the seller.

The stipulations aforesaid are to apply to and bind the successors, heirs, executors, administrators and assigns of the respective parties.

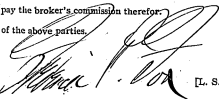
The seller agrees that

brought about this sale, and agrees to pay the broker's commission therefor.

WITNESS the hands and seals of the above parties.

IN PRESENCE OF

James H. Cairns.



[L. S.]

[L. S.]

[L. S.]

THOMAS A. EDISON,  
PRESIDENT.

W. E. GILMORE,  
VICE PRESIDENT & GENERAL MANAGER.

J. F. RANDOLPH,  
TREASURER.

A. WESTEC,  
SECRETARY.



THOMAS A. EDISON

## EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N. J.

EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.

10 FIFTH AVENUE, NEW YORK.  
306 WABASH AVENUE, CHICAGO.

CABLE ADDRESS  
"AURILIAN, NEW YORK"

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND REVERSE THESE INITIALS.

ADDRESS YOUR REPLY TO

W. P.

*New York*

Nov. 1st, 1907.

Mr. Frank E. Bradley,

290 Broadway,

New York, N. Y.,

Dear Sir:

In re Edison Studio:

Your letter of the 28th ultimo, enclosing diagram  
of survey and you bill for services in connection with the  
purchase of the additional strip of land, came duly to hand.

Your bill has been forwarded to the Auditing De-  
partment for payment.

Yours truly,

EDISON MANUFACTURING CO.,

*[Signature]*  
Legal Dept.,

K

**Legal Department Records  
Motion Pictures - Correspondence**

**Color Photography - Brasseur, Charles L.**

This folder contains correspondence, drawings, and other documents pertaining to the U.S. patent applications of Charles L. Brasseur and to his work with the Edison Manufacturing Co. on color photography. The selected documents are from 1908. Included are letters by Brasseur, Frank L. Dyer of the Legal Department, and William E. Gilmore of the Edison Manufacturing Co.

Approximately 30 percent of the documents have been selected. Among the unselected items are a few letters from Brasseur to Dyer Smith of the Legal Department (1906, 1910) and copies of outgoing correspondence from Frank L. Dyer to Brasseur and William E. Gilmore. There is also a drawing labeled "Lumière" and a document relating to thread veneering. Related correspondence can be found in the "1908. Motion Pictures" folder in the Document File Series.

CHARLES L. BRASSEUR

COLOR-PHOTOGRAPHY.

18 EAST 15TH STREET.

New York, March 10, 1908. 190

Frank L. Dyer, Esq.,  
Montclair, N. J.

Dear Sir:-

If I understand your telephone message correctly, you purpose acquiring, for Mr. Edison, the exclusive right to use, in connection with the moving picture industry exclusively, such U. S. patents for color-photography on roll-film as may be granted me, and of which the specifications have been furnished you.

The conditions you mention for the periods of trial are satisfactory, namely, that I devote one year of my time, beginning March 16th, to the industrial development of these patents; Mr. Edison to pay such expenses as may be incurred for machinery (state limit if wished); to furnish such assistants as may be necessary and to pay the other minor necessary expenses to develop these patents industrially.

In addition to such disbursements, I am to receive \$400. per month for my personal expenses and I further understand that, should it be found necessary to devote another year to this development, I am to do so on the same terms.

Further, I understand that I am to receive a royalty, during the life of these patents, amounting to 25% of the extra profit derived from the sale or rental by the Edison Co., of colored moving picture films made by my processes; it being understood that this extra profit will be determined as follows:



CHARLES L. BRASSEUR.

COLOR-PHOTOGRAPHY.

32 EAST 16TH STREET.

New York, \_\_\_\_\_ 190

F. L. D. #2.

That, to the selling price of black and white film will be added the cost of coloring the film and that the difference between this total cost and the selling price of the colored film, will constitute the profit.

It is further understood that, should Mr. Edison grant a license to other moving picture concerns to use these films under these patents, I will receive 50% of whatever royalty he may receive.

There is one part of your message which I did not understand and that relates to the point brought out by your Mr. Gilmore namely, what will be the minimum royalty paid should Mr. Edison decide to forego all profit on the color end and content himself with the increased profits which would result from the increased sales of colored films at the price of black, plus the mere cost of color? It might be a very good business move on your part, but as matters stand it would prove rather disastrous to me.

Kindly let me hear from you in regard to this, also as to whether my understanding of your message is correct. *and Hope*

Yours very truly,

*Charles L. Brasseur*

*Color  
Photography*

March 13, 1908

Charles L. Brasseur, Esq.,  
10 East 15th Street,  
New York, N.Y.

Dear Sir:-

I am in receipt of your letter of the 10th  
inst as follows:-

"Frank L. Dyer, Esq.,  
Montclair, N.J.

Dear Sir:-

If I understand your telephone message correctly, you purpose acquiring, for Mr. Edison, the exclusive right to use, in connection with the moving picture industry exclusively, such U.S. patents for color-photography on roll-film as may be granted me, and of which the specifications have been furnished you.

The conditions you mention for the periods of trial are satisfactory, namely, that I devote one year of my time, beginning March 16th, to the industrial development of these patents; Mr. Edison to pay such expenses as may be incurred for machinery (state limit if wished); to furnish such assistants as may be necessary and to pay the other minor necessary expenses to develop these patents industrially.

In addition to such disbursements, I am to receive \$400. per month for my personal expenses and I further understand that, should it be found necessary to devote another year to this development, I am to do so on the same terms.

Further, I understand that I am to receive a royalty, during the life of these patents, amounting to 25% of the extra profit derived from the

No.-2, CLEB.

sale or rental by the Edison Co., of colored moving picture films made by my processes; it being understood that this extra profit will be determined as follows:

That, to the selling price of black and white film will be added the cost of coloring the film and that the difference between this total cost and the selling price of the colored film, will constitute the profit.

It is further understood that, should Mr. Edison grant a license to other moving picture concerns to use these films under these patents, I will receive 50% of whatever royalty he may receive.

There is one part of your message which I did not understand and that relates to the point brought out by your Mr. Gilmore, namely, what will be the minimum royalty paid should Mr. Edison decide to forego all profit on the color end and content himself with the increased profits which would result from the increased sales of colored films at the price of black, plus the mere cost of color? It might be a very good business move on your part, but as matters stand it would prove rather disastrous to me.

Kindly let me hear from you in regard to this, also as to whether my understanding of your message is correct, and oblige -

Yours very truly,  
Chas. L. Brasseur."

Regarding the above, there are several points concerning which you have not correctly understood our proposition:

(1) Mr. Edison is to have not only "the exclusive right to use, in connection with the moving picture industry exclusively, such U.S. patents for color-photography on roll-film as may be granted", but also all inventions whether patented or not which you have made or which you may make during the term of the contract for use in connec-

No.-3, CLB.

tion with color-photography as applied to the moving picture industry. In other words, you are to give us the benefit of your skill, knowledge and experience regardless of patents.

(2) As to the expenses which are to be paid, these, of course, will have to be defined as clearly as possible in the formal contract.

(3) It is to be understood that the arrangement with you is to continue for one year with the option on our part to extend it for a further period of one year if the outlook is favorable.

(4) Perhaps the plan suggested by you for calculating the amount of royalty amounts to the same thing as the one which I suggested, but in order to be perfectly safe our position should be understood. The royalty of course cannot be based on profit made from the sale of colored films, but should be based solely on the added value of your process. If the profit to the manufacturer on a black and white film is, for example, four cents per foot, and the profit on colored films is seven cents per foot, then obviously, the added value contributed to the film by your process, would be three cents per foot. It is this difference between the profit made on the colored films, and that which would be made on the black and white films, that is to be divided in the proportion of 75% to us and 25% to you.

No.-4, CLB.

As I explained, in each case the manufacturing cost of films, both black and white and colored, shall comprise the cost of labor, and materials, general expense, and 20% for selling expenses, etc. Deducting these items in each case, from the actual selling price, will give the net profit. In order that you might be entirely protected in case, for commercial reasons, it should be decided at some future time to sell colored films at no greater profit than black and white films, I propose that royalties in every case should at least amount to \$5,000. per year. It is difficult to see how such a condition of affairs could arise, because the colored films would undoubtedly command a greater profit than the ordinary films, but at the same time, you should be protected against all contingencies. With these modifications, the proposition as outlined in your letter, quoted above, is that suggested by me, and which I will embody in a formal contract as soon as possible.

Should this arrangement be satisfactory, kindly indicate your approval on the bottom of this letter and return the same to me, retaining the enclosed copy for your own use.

Yours very truly,

FLD/ARK.

General Counsel.

THOMAS A. EDISON,  
PRESIDENT

W. E. GILMORE,  
VICE PRESIDENT & GENERAL MANAGER

C. H. WILSON,  
ASSISTANT GENERAL MANAGER

J. RANDOLPH,  
ASSISTANT

A. WESTEE,  
SECRETARY  
& TREASURER



THOMAS A. EDISON  
Thomas A. Edison

## EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N. J.

EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.

10 FIFTH AVENUE, NEW YORK.  
304 WABASH AVENUE, CHICAGO.

CABLE ADDRESS  
"AURILIAN, NEW YORK"

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

ADDRESS YOUR REPLY TO

*Orange, N. J.* Mar. 16, 1908.

Frank L. Dyer, Esq.,  
c/o The Cochran,  
Fourteenth & K Sts.,  
Washington, D. C.

Dear Mr. Dyer:

Mr. Brasseur has been in to see me to-day in regard to the last letter you wrote him and which I saw before it was forwarded to him. The only little problem that now comes up is that of the royalty that he is to be paid under his agreement with us. Five thousand dollars per year may seem all right, but he is a little afraid that in the event of the coloring being made universal the price will be so low as to be practically the same as what the black and white photographs have been so that there is no profit in it for either ourselves or Mr. Brasseur. In other words, it puts him in the position that we could at some future time sell these prints at such a price that all we would have to do would be to pay him \$5,000 a year minimum and that is all he would get. His position is entirely tenable and we should agree to it. I have practically agreed that the minimum amount that we shall pay him per foot is 1/4 cent per foot; do you approve of this? I consider that his position is entirely correct and have therefore practically decided that I will let him have this. Possibly you can see some objection that I cannot see

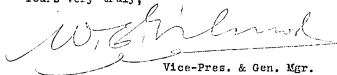
F. L. Dyer.

(2)

3/16/08.

now. Write me so that I will get it Wednesday morning.

Yours very truly,

A handwritten signature in cursive script, appearing to read "W. G. Ireland". The signature is written in dark ink and is positioned above the typed name and title.

WEG/IWW

Vice-Pres. & Gen. Mgr.

CHARLES L. BRASSEUR.  
COLOR-GRAPHY.  
15 EAST 10TH STREET.

D  
1908

M.P. - Film

New York, March. 17, 1908.

Frank L. Dyer, Esq.,  
Orange,  
N. J.

Dear Sir:-

I called to see you yesterday afternoon in regard to your letter of the 13th inst. and, in your absence, discussed the various points with Mr. Gilmore. The points which you have brought up in your letter will be settled in the way you suggest, as that is entirely in the spirit of the understanding, with the exception of the one relating to the minimum amount to be paid me. As I explained to Mr. Gilmore that clause, left as you suggested it, would probably prevent me from coming to an agreement with the parties who are to furnish me the amount of money I require at the present moment as it would make it possible for your successors to increase their business indefinitely without being legally bound to pay me more than the \$5,000. per year, that is, if they saw fit to do without any profit on the coloring of the film. Both Mr. Gilmore and I agreed that a supplementary clause should be added fixing the minimum royalty to be paid me at not less than 1/4 cent per linear foot. This I think is fair to all concerned.

Before drawing up the contract, I would like to discuss another point with you (which I have discussed with Mr. Gilmore) and which I can make clear to you verbally much



CHARLES L. BRASSEUR.  
COLOR-GRAPHY.  
12 EAST 15TH STREET.

New York,

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F. L. D. #2.

quicker than writing.

Would you happen to know what the law of New Jersey is in regard to high pressure boilers (125 to 175 pound pressure)? My man in Little Falls has been managing his own boiler although not having, I believe, a certificate of licensed engineer. As I am looking around for suitable quarters, to put everything under one roof, I would like to know what the law calls for, as, in case a licensed engineer is necessary, it would be much cheaper to obtain the steam from some neighboring building. If you know about this, kindly let me know and oblige,

Yours very truly,

Chas L. Brasseur.

Mr. Wilcox has your letter.

I will return it on receipt as called  
for.

Find no State law  
So pressure is governed?  
by local ordinance.  
as

*to Mr. Gilmore*

March 17, 1908.

W. E. Gilmore, Esq.,  
Elsen Manufacturing Co.,  
Orange, N. J.

Dear Mr. Gilmore:

Yours of the 16th inst. has been received in reference to Mr. Brasseur, and I agree with you that it would be entirely fair to provide in the arrangement for a minimum royalty of one-quarter cent per foot. I will bear this in mind in preparing the formal contracts.

Yours truly,

1908 M.P. - 7<sup>th</sup> Ave  
*Legal Department.*

Telephone 907 Orange!  
Call or address "Legal Orange."

Thomas A. Edison.  
National Phonograph Co.  
Edison Manufacturing Co.  
Pathe Manufacturing Co.  
Edison Storage Battery Co.

Frank L. Dyer, General Counsel.

425



March 23, 1908

Wm. E. Gilmore, Esq.,  
Building.

Dear Sir:-

Regarding the attached correspondence, I return  
the same to you at your request, since I have a copy of my  
letter to you and can use that in the preparation of the con-  
tract.

Yours very truly,  
*Frank L. Dyer*  
General Counsel.

FLD/ARK.  
Encs.

*Frank*

[ATTACHMENT]

*Legal Department.*

*Thomas A. Edison  
National Phonograph Co.  
Edison Manufacturing Co.  
Bates Manufacturing Co.  
Edison Storage Battery Co.*

425

*Telephone 507 Orange,  
Cable Address "Edison, Orange"*

*Frank L. Dyer, General Counsel*



William E. Gilmore, Esq.,  
Edison Manufacturing Company,  
Orange, New Jersey

Dear Mr. Gilmore:-

In reference to the patent situation as it affects the proposition of having Mr. C. L. Brassacur undertake to develop his scheme for applying color photography in the moving picture business, I beg to advise you as follows:

(1) Upon discussing the question with the Patent Office Examiner in Washington, and making a careful examination of the available patents, I find that there were two patents to Mac Donough, granted March 22, 1892 (Nos. 471,186 and 471,187) that would apparently be infringed, but since these patents expire on March 22, 1909, they are not important. I have not been able to find any other patent which appears to be infringed, at least as the scheme has so far been worked out by Mr. Brassacur.

Not trusting entirely to my own judgment in the matter, since the subject is a highly technical one, I submitted certain patents to Mr. Brassacur with the request that he give me his opinion thereon. This report which coincides with my own opinion is attached hereto.

[ATTACHMENT]

W. F. Gilmore, Esq.

-2-

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3/6/08

(2) Mr. Brassauer's applications for patents are in satisfactory shape, although the claims can no doubt be improved. The inventions can, in my opinion, be satisfactorily protected by patents.

(3) So far as I can judge, from my brief knowledge of the art obtained from reading the various patents, Mr. Brassauer's theories appear to be correct, and I should say the problem involves a perfection of mechanical details rather than photographic or optical considerations. No doubt Mr. Edison can contribute many suggestions which will be of value, because the mechanical problem involved, namely: the extreme sub-division of celluloid bodies or grains, and their application to a celluloid film, is a problem that in some form or other he must have encountered at various times in his experimental work. At the same time the problem impresses me as being extremely difficult, although I should say it was less difficult than the development of the vacuous deposit process.

(4) So far as any future difficulties that may be encountered in the Patent Office and elsewhere are concerned, I cannot, of course, express any opinion, although I do not anticipate trouble. On the whole I believe the situation to be sufficiently favorable to warrant taking up the matter, since if it turns out successfully it would be a very great advance in the art.

Yours very truly,

*Frank L. Rice*  
General Counsel.

WLD/MJL

[ATTACHMENT]

New York, March 5, 1908.

Frank L. Dyer, Esq.,  
Montclair, N. J.

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Dear Sir:-

I have carefully read over the various patents submitted to me by you. All those relating specifically to this branch of color-photography were already known to me, and I see no reason to change my opinion that I will in no way conflict with any of those submitted by you or <sup>with</sup> any other patents known to me.

As to Diffraction color-photography, while it is extremely ingenious, I have never heard or read anything which would lead me to suppose that such photographs could be satisfactorily projected. The plates are colorless by themselves and need to be viewed by means of a special instrument in order to bring out the colors. Moreover, Mr. Ives in discussing my new methods with me, has never even intimated that these could in any way be substituted for mine. I do not believe that, in our connection, they deserve serious consideration and they are certainly very inferior in color rendering to those obtained by the ordinary processes.

To make it clear to you as to why I believe I do not conflict with others and also why we can expect a clear field in our own particular line, I think it best to consider:

- 1st the colors employed
- 2nd the various methods of making grained screens.
- 3rd the methods of duplicating.

The colors employed by me are those described in my French patent 364182 of March 1st 1906, and United States

[ATTACHMENT]

application Ser. 359895 filed under the Convention, Feb. 28, 1907, namely, the colors of the negative ortaking screens are such, that, when photographing the spectrum of white light, the deposits of silver obtained will correspond with Abney's color-mixture curves as shown in Fig. I. of that patent and the colors of the positive or viewing screens are primary colors, i.e. the red corresponds in hue to wave length 6700, the green to 5200 and the blue-violet to 4600.

These colors , while deduced in a different manner than those indicated by Mr. Ives (U.S.patent 432550, July 22nd 1890) were so near like his in color, that I felt it incumbent upon me to offer to pay Mr. Ives a royalty for the use of his colors, and did so until the expiration of his patent July 1907. That patent having expired, his colors are of course public property. As to colors I see no possibility of trouble or a conflict with any other patent. \*

- - - - -

Grained and lined screens, for color-photographic purposes, are first mentioned in French patent 83061, Nov. 23, 1868 of Ducos du Hauran. Among other processes, he describes one in which the colors are ruled on the plate in a regular recurring patent, also one, in which the sheet (mica) is covered mechanically with a grain of three colors, or to quote literally "une feuille translucide recouverte mécaniquement d'un grain de trois couleurs." While he goes into details as to the method of making lines and states how to duplicate such lined photographs,

\* The matter as to whether or not Mr. Ives was anticipated by Clerk-Maxwell (see lecture of 1861) whose curves Mr. Ives uses, is much discussed by experts. Mr. Ives having brought suit against alleged infringers, the matter will be settled shortly.

[ATTACHMENT]

he gives no intimation as to how he would produce the grained plates. In this patent he also mentions ruled paper, covered with a sensitive film and printed from the back. We therefore find there, all the elements of the modern processes, namely, a support, plate, paper or mica, a ruled or grained surface and a layer of sensitive material coated thereon, out of which is to be formed the photograph. Unfortunately he does not seem to have known of Clerk-Maxwell's lecture, or to have realized how epoch making that lecture was, for he uses Brewster's triad of colors, namely, a red, yellow and blue with which triad, color photographs cannot be obtained by the additive processes.

The next patents to be considered are the McDonough United States Patents 471186 and 471187 of March 22, 1892.

In these patents we find the grained plate practically as known today, namely, a mixture of grains of three colors, red, green and blue (and if necessary yellow,) dusted on a tacky surface, the grains being then made to fill up the interstices by heating the plate until the grains melt and touch one another. While in one of these patents 471187 he mentions a celluloid support, he is very careful to state, that he interposes the gelatin emulsion between the celluloid and the grains which of course totally unfits it for our purpose. As this patent expires in March 1909, discussion of its validity in view of the du Haumont patent, is only of academic interest.

The only other grain process known to me is that described in the Lumiere patent -- U. S. patent 822532 of June 5, 1906. The only difference between that and the McDonough patent is that the Lumiere fill in the interstices with smaller grains, in reality, charcoal. In a British patent of 1906 they mention rolling the plate to flatten out the grain. This, however, is not a new thing



[ATTACHMENT]

in screen making, for July, in British patent 19388 of 1895, specifically mentions rolling his plates, covered with fibres, for the purpose of smoothing them down. Moreover, in my own case rolling, alone, would not answer; I must have heat and rolling, <sup>or pressure</sup> in order to weld the grains together.

I see no reason to anticipate any conflict in connection with any of the above-mentioned patents.

On the other hand, my screens differ radically from those previously described. Firstly, the material of which the patent is made is such that, under the influence of heat and pressure, the elements constituting the pattern will be welded together and also to their support, so that the resulting film can be rolled and unrolled without danger of loosening the grains or other elements forming the pattern. In the other processes the grains are merely glued on or held on by a varnish, but do not form part of the film.

Secondly, the grains being cut mechanically, a much greater uniformity of size is possible than with the natural starch grains. This facilitates a most thorough mixing and the method of applying on a non-tacky surface ensures a much more even distribution than is possible with the present processes.

Thirdly, provision is made for locating the grains of at least one color, so that a practically perfect distribution can be made, if found necessary.

Fourthly, the grains being of celluloid, being flattened on both sides and the whole film being polished, the utmost transparency possible is obtained, which cannot be said of starch grains.

Attempts have been made in Germany by Witt and by

[ATTACHMENT]

Krayn, to make celluloid screens by cementing sheets of alternate colors together and cutting off sections so as to obtain line screens at one operation. All the sheets I have seen showed lines very much too broad and the sections were much too irregular to be of any practical use, the lines thus obtained being two hundred to the inch.

If it were possible to obtain very thin sections of any practical size, and then to cement these sections on a continuous, colorless film, I would certainly try it and I think moreover that it would be patentable as such. Flowed films of extreme thinness would have to be cemented together, but the sectioning of this block would have to be so many times finer than it has been found possible to do it thus far, that it seems almost hopeless to try it.

As to duplicating, the Lumiere's admit that it is not possible to duplicate by any of the processes thus far made public. The only process of which I have heard lately is by Powrie, formerly of Chicago and now in England. I have never seen any of them, but I understand the process was offered the Lumiere's and their representative in this country tells me that the results are "rotten". Neither the American nor the English nor the German office have as yet brought forth any patent which conflicts with the principles as established in my application of Feb. 28, 1907, namely, that in the process of copying a colored negative on a grained film, it is necessary to interpose between the source of light and the negative, or between the negative and the positive, mono-chromatic screens as described in the above mentioned application. The British office has shown that colored sectors were used, but as these are not made in suitable colors, and as moreover,

[ATTACHMENT]

sectors are not at all essential, but are merely a convenient way of arranging the colors in a lens, this would neither prevent me from using the proper colors, nor allow any one else to use these colors without my permission.

As to whether the out-bleaching process, or that using diazo or tetrazo sulphonates, etc., offer any possibility of making duplicates, all I can say is that the results so far obtained have been most unsatisfactory from an industrial standpoint. The out-bleaching, which is the most satisfactory, requires several minutes of strong sunshine to bleach out the colors and no method has yet been found of fixing the remaining colors. The Lippmann process offers many possibilities for prints seen by reflected lights, but not for transmitted, at least I have never heard of anything that would lead me to believe that it offers such possibilities.

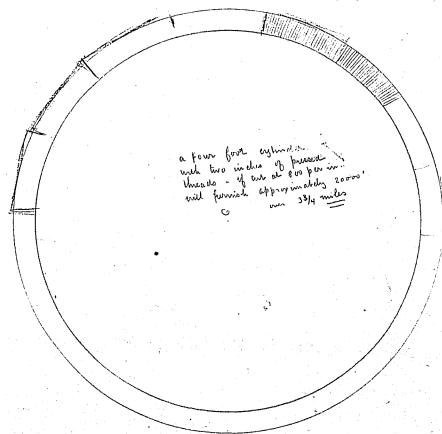
After duly considering the entire matter, I see no reason for changing my opinion as first expressed.

I remain,

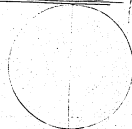
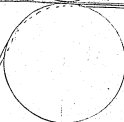
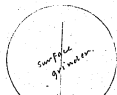
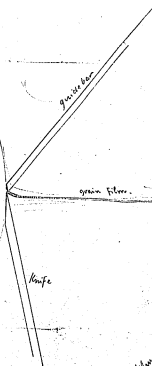
Yours very truly,

*Chas. L. Brannen.*

Each element is triple-  
 those thousands pressed together.  
 or those thousands twisted.



a four foot cylinder  
 with two inches of pressure  
 inside - if cut at 100 psi  
 will furnish approximately 2000  
 or 3 1/2 miles



**Legal Department Records  
Motion Pictures - Correspondence**

**Color Photography - Davidson, William N. L.**

This folder contains correspondence and other documents relating mainly to color processes invented by William N. Lascelles Davidson of Brighton, England. The selected documents are from 1905. Included are letters by Davidson; John R. Schermerhorn, assistant general manager of the Edison Manufacturing Co.; and James H. White, managing director of the Edison Manufacturing Co., Ltd. Some of the documents pertain to Davidson's collaboration with William Friese-Greene on color animation.

All of the documents have been selected. Related correspondence can be found in the "1905. Motion Pictures" folder in the Document File Series.

April 20, 1905.

James H. White, Esq., Managing Director,  
Edison Manufacturing Co., Ltd.,  
London, England.

Dear Sir:

I beg to enclose you herewith copy of letter which Mr. Gilmore has received from Mr. Baucus and which is self-explanatory.

Mr. Gilmore agrees with me that it would be a very good plan for you to arrange to see what this man has. You, without doubt, can spare the time to run down to Brighton, and, of course, it goes without saying that you want to get all the information you can. After you have made a thorough investigation, we would be glad to have you write us your personal opinion of the merits of their scheme.

Yours very truly,

JRS/IWW

Enc-

Asst. Gen. Mgr.

[ENCLOSURE]

Jos. D. BAUCUS,  
COUNSELLOR AT LAW,

Cable Address:  
BEECHNUT 1 NEW YORK,  
TELEPHONE, 3707 BROAD.

Mr. W. E. Gilmore

Vice Pres. & Gen. Mgr.,

Edison Mfg. Co.,

Orange, N. J.

My dear Gilmore:-

I have just received the following cable from Friese-Greene:  
"Captain Lascelles Davidson has succeeded in producing animated pictures in natural colours results here what price for his American patent you can have first refusal cable to Davidson or Friese Greene 20 Middle street Brighton England."

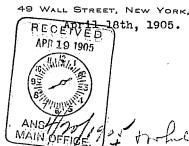
I know Davidson and Greene have been working for several years on this line and have produced some results. The last time I saw any of them, however, I did not consider that the invention had reached a commercial stage although it had possibilities. Of course I cannot say whether it is at a commercial stage now or not, but I think it would be worth while to look into it and would suggest that you cable White or whoever is in charge of your London office to go to Brighton, which is about an hour's run from London, see Davidson, mention my name and report to you the results of his investigation.

As to the value of this invention if it is perfected, you can judge as well as I can. I certainly would not advise your making any offer until you know a little more about what results have been obtained.

With very kind regards,

Yours sincerely,

*Jos. D. Baucus*



Telegrams & Cables: "RANDOMLY, L.O.S."  
Telephone No. 6050, HOLBORN.

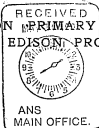


Cable Codes Used: A.L., A.S.C., COMMERCIAL,  
LIEBKE, and HUNTING'S.

## EDISON MANUFACTURING CO. Ltd.

(FACTORY: ORANGE, N.J., U.S.A.)

EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.



25 Clerkenwell Road,  
London, E.C.

2nd May, 1905,

J. R. Schermerhorn, Esq.,  
Assistant General Manager,  
Edison Manufacturing Company,  
Orange, New Jersey.

Dear Sir,

Your communication dated April 20th enclosing copy of letter written by Joseph D. Baucus on the date of April 18th, addressed to Mr. Gilmore having reference to a supposed invention relating to colour photography and animated pictures by Messrs. Freiese Green and Captain Davidson, Brighton, England, is just at hand.

I am quite well acquainted with Mr. Green mentioned in this communication and know Captain Davidson by reputation. I some time ago saw some samples of animated picture colour photography which these people were exhibiting and beg to tell you that I did not at the time think their scheme practicable, and from reports I have had I very much doubt whether the thing has been perfected as indicated by their telegram to Baucus. However, I will be glad to investigate for you, but before going down to Brighton I shall find out whether they are in a position to give me a practical demonstration, and just as soon as I have seen the real article I will write you fully.

Commenting on Baucus' communication to Mr. Gilmore, will say that I am very glad to see that he has endeavoured to give you such a correct report of Green's work. I am glad to be able to confirm Baucus' opinion. I know Green to be a very bright fellow and considerable of an inventor, but I am quite as sceptical as Baucus in regard to his colour photography having reached a commercial stage. My understanding of Captain Davidson is that he is the "lamb", who is financing these experiments. Of course, if these people have anything that is good and I think it important enough I will cable you on the matter; at any rate I will learn just what there is to it, and what, if any, arrangements can be made.

Very sincerely yours,

J.H.W./L.D.

*J. H. White*  
Managing Director.



Telegrams & Cables: "RANDOMLY, LON"  
Telephone No. 6050, HOLBORN.

TRADE  
Thomas A Edison.  
MARK

Cable Codes Used: A.L., A.B.C. COMMERCIAL,  
LIESSKE, AND HUNTING'S.

LB 88 F 32

## EDISON MANUFACTURING CO. Ltd.

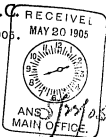
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EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.

25 Clerkenwell Road,

London, E.C.

6th May, 1905.



J. R. Schermerhorn, Esq.,  
Orange, New Jersey, U.S.A.

Dear Sir,

Referring further to your favour of April 20th re the taking of animated pictures in colour by Messrs. Green & Davidson of Brighton, England - I have paid a visit to the Laboratory of these gentlemen and thoroughly inspected their process. I will endeavour to be as cautious as possible in reporting to you on this matter as you are doubtless aware I am somewhat apt to "enthusias" on the subject of animated pictures.

I will say first, that while I do not consider these people have yet succeeded in getting their process absolutely down to a commercial basis, I do believe that they have made a most important step in the art, and the results which they have obtained are really wonderful. In the first place they were able to project a picture on a small screen about 12" x 16" showing a picture of Captain Davidson himself in the uniform of a British Artillery officer, and they were able to bring out the red coat with the blue trousers and red stripes very perfectly, and also by turning the smooth side of the film to the light they were able to reverse the colours, that is to say, the coat then appeared blue. They are, of course, working along the lines of the tri-colour system, although they use a single film only in projection and employ no colour screens whatever except two glass prisms containing the primary colours, red and blue. The film contains, of course, a double image, and when thrown on the screen the two images are transposed, thus blending the two primary colours, red and blue, and of course giving the whites and greys, etc.

The apparatus for showing the pictures is very simple indeed, and in fact consisted of a projecting machine made up of the parts of several types including the Edison, Warwick, Lumiere, etc, there being nothing complicated whatever. I, of course, look at the

Telegrams & Cables: "RANDOMLY, L. E. N."  
Telephone No. 5050, HOLBORN.



Cable Codes Used: A.S., A.B.C., COMMERCIAL,  
ALLENBY, AND HUNTING'S.

## EDISON MANUFACTURING CO. Ltd.

(FACTORY: ORANGE, N.J., U.S.A.)

EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.

25 Clerkenwell Road,

London, E.C.

matter from a practical standpoint, and immediately asked them whether or not they could show me a picture on a large screen, 10 to 12 ft., and they stated that they would be glad to give me such an exhibition at a later date, and that for this purpose they will procure the curtain of the Empire Theatre in Brighton and let me know when they are able to make an exhibition. Personally, I am inclined to be very cautious on the subject of animated pictures in natural colours as you know so many people claim to have perfected the process, but as stated above I believe these people have done something very important, and after I have seen their exhibition on a large screen I will report to you more fully.

Now as to terms - they ask £60,000 (Sixty thousand pounds) for the sale outright of their American patents, but they are open to a proposition whereby you would pay them a smaller amount and give them an interest in the proceeds from your business in U.S.A. They have stated £60,000 is the lowest figure they would consider for the purchase of the American patents outright. I may tell you that their American patents have issued and that I have seen them. I give you the numbers below, and think perhaps it might be well for Mr. Dyer to obtain copies in Washington so that they can be fully examined by yourselves.

The first patent is No. 676532 covering cinematograph photography in natural colours dated June 1901, and taken out in the name of W. N. L. Davidson.

The second patent is No. 193673, dated February 1904, taken out in the names of Jumeaux and Davidson.

You might let me know by return of post if you wish me to go any further in this matter, that is to say, whether or not you want me to secure an option for you for any length of time.

The next time I go to Brighton I will endeavour to procure a piece of film and send it along to you. They did not seem disposed to give me a piece of film on my last visit.

I may tell you further that they do not employ any colour whatever in the film itself and they tell me that the ordinary cinematograph film is used in the process, and that all they do is to immerse it in a special bath which renders it highly sensitive,

Telegrams & Cables: "RANDOMLY, LON."  
Telephone No. 6050, HOLBORN.



Cable Codes Used: A.S., A.R.C., COMMERCIAL,  
LIEBER'S, AND HUNTING'S.

## EDISON MANUFACTURING CO. Ltd.

(FACTORY: ORANGE, N.J., U.S.A.)

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EDISON PROJECTING KINETOSCOPES AND FILMS.

25 Clerkenwell Road,

London, E.C.

so as to allow them to procure sufficient time of exposure through  
the red and blue glass prisms.

I shall watch very carefully what they are doing with this  
process here in England. They tell me they have already sold an  
option on the English patents, and I shall be particularly inter-  
ested to find out who has taken it up and what progress they are  
making. You may rely on my keeping you fully posted at Orange.

Very sincerely yours,

*Josiah White.*  
Managing Director.

J.H.W./L.D.

# CONCERNING PHOTOGRAPHY.

BY HECTOR MACLEAN,

AUTHOR OF "PHOTOGRAPHY FOR ARTISTS," &c.

The Camera Club lecture room continued on Monday evening with photo transparencies of varying dimensions, none of which suggested dramatic effects. Mr. Otto Peterson, who was responsible for the display, explained that the examples shown were produced by means of "Photochemical," the essential characteristics of which was that a white but more or less translucent textile in on both sides surfaces coated—and not, as is noticed, permeated—by a silver bromide emulsion. Hence unusually vigorous prints which show by reflected or by transmitted light rays. Photographs of statuary and stained-glass windows (which latter had been dyed with specially prepared pigments and measured about 18 in. by 12 in.) were shown and explained. The utility of the process for scenic illustrations and effects will be displayed in a few weeks at the Colliseum. The material seems also well adapted for window blinds, advertising purposes, miscellaneous decorative work such as screens, and as a basis for the collecting of portraits.

Those who had the good fortune to be present at the Royal Photographic Society's meeting on Tuesday evening enjoyed the pleasure and satisfaction of seeing a collection of tricolour transparencies by an amateur who has devoted nearly ten years to the construction and adaptation of suitable apparatus and to the application of it to the production of colour photographs. Mr. E. F. Butler detailed his experiments in creating a suitable tricolour camera and his endeavor to obtain a co-relation of the chief factors, i.e., the colour sensitiveness of the plates, the colour of the light filter, and the composition of the dye used. Of the fifty or sixty results that shown in public on the occasion all were notable for their avoidance of light and fulness of colour. Some scenes on the Thames at Lambeth were, pictorially speaking, delightful. Other noteworthy results included autumn scenes, portraits, and leaving waves, which last had been taken in zenith of a second.

An exhibition which should not be missed is that now open at the Alpine Club, 25, Burlington, containing of photographs depicting the mountainous scenery of most parts of the world. The walls are covered with "lofty" delights, including pictures of stupendous ice-fields, weirdly beautiful caverns, stupendous glaciers, dissolving into lake-filled valleys, and scenes of clouds heaving upon the high peaks that reach up above the billows of mist. To mention a few of the good things, Miss Ellis shows clever "Icefalls," Miss Dimity a fine print of the Lac de Lewis, Dr. Tennant, Anderson a somewhat "Explosion at Breckenwell," Dr. W. Hunter Workman some imposing Himalayan scenery, and Mr. J. Norman Gifford a suitably titled view of Fuji San. The exhibition closes on the 11th inst.

An important and apparently far-reaching advance in cinematography has been effected by Captain Leonidas Dardanis, who has succeeded in making and projecting colorized photographs in colour. An invention which the inventor accorded me on Wednesday of his moving photographs as projected upon the screen impressed me with the broad fact that before my eyes light and motion were depicted in strong colours. Red, yellow, brown, orange, green, and in a minor degree blue, were present in various proportions. An ordinary cinematograph camera and film are used, the film being peculiarly colored and coated. Two images are transmitted by means of a prism and colour filters side by side on to the film, these are subsequently converted into positive as explained below. One image on the lantern screen, in which the colours of the original scene are repeated. It is proposed to apply the invention to "positive" cinematography as well as to the machine used for public entertainments.

It has long been the desire of investigators to be able to photograph the sun's corona, not merely during the course of eclipses, but at all other times when it is visible. This has been more or less completely accomplished Messrs. A. Hanbury, who has for the past four years been experimenting with a camera on Mount Blanc. Interesting particulars of his procedure and results will be found in the May Knowledge. Shortly put, his method is as follows: All rays but the red ones are cut off by suitable light filters placed in contact with the plate. In front of the filters was fixed an opaque disc slightly larger than the projected solar image. Exposure varied from thirty to one hundred and twenty seconds, aperture used was an 8 in. stop. Resulting negatives lacked contrast and required extensive intensification. It is thought that the plates became partially fogged by the bright sunlight reflected from the front of the black disc filling on the objective and then reflecting the plate. I suggested that this would be overcome by placing the in front of the lens. Might not the trouble be limited by placing the disc between the filter and the lens?

The notes by me must be credited with having the prime of a delightful photographic display of the scenery of the East and of Central Africa with which I Bruce, R.N.M.C., favoured the Camera Club on Tuesday evening. For it was in order to invent in which these scenes may meet and hundreds of thousands that he spent his life. Part of his investigations were specimens of the "How, when, where, when one the scene" and it may be "could be."

Telegrams & Cables: "RANDOMLY, L.O.S."  
Telephone No. 6050, HOLBORN.



Cable Codes Used: A.L., A.R.C., COMMERCIAL,  
LIRICH'S, AND HUNTING'S.

## EDISON MANUFACTURING CO. Ltd.

(FACTORY: ORANGE, N.J., U.S.A.)

EDISON PRIMARY BATTERIES AND FAN MOTOR OUTFITS  
EDISON PROJECTING KINETOSCOPES AND FILMS.

25 Clerkenwell Road,

London, E.C.

13th May, 1906

J. R. Schermerhorn, Esq.,  
Orange, New Jersey, U.S.A.

Dear Sir,

With further reference to the matter of animated pictures in colours by Messrs. Green & Davidson of Brighton, England, I enclose you herewith copies of telegrams dated the 8th and 10th, and also two letters dated the 10th which I have received from these people. I think you will find them explanatory. You will note that they are "Backing water" on the matter of showing pictures on a large screen. I have communicated with them and advised that paying £1000 option is quite out of the question, and that unless they care to give me a demonstration on a large screen as per their promise we will consider negotiations entirely off. If they come to time and give me the demonstration that I require I will communicate with you further on this subject, if not I will allow the matter to drop.

Very truly yours,

J.H.W./L.D.

*J.H.W. Little*  
Managing Director.



[ENCLOSURE]

COPY TELEGRAM Dated 8th May, 1905.

TO RANDOMLY LONDON.

It has been shown on a large screen as I told you The price cannot be the same if delayed Thousand pounds deposit must be paid this week for option at my price DAVIDSON.

COPY TELEGRAM Dated 10th May, 1905.

To RANDOMLY LONDON

Would prefer your firm having my patents Must know Saturday latest  
Am willing to pay five pounds for cable for definite answer

DAVIDSON

[ENCLOSURE]

N. P. Co., Ltd.

C O P Y.

20, Middle Street,

Brighton.

10th May, 1905.

Dear Sir,

In continuation of my letter posted to you to-day, I wish to make it clear that if your Company wish to retain my interest in the Patents I am willing to accept forty thousand pounds in cash and forty thousand pounds in fully paid shares (Limited liability).

Kindly note this correction in my previous letter of even date.

Very truly yours,

(Signed) W. W. LASCELLES DAVIDSON.

[ENCLOSURE]

N. P. Co., Ltd.

C O P Y.

20, Middle Street,

Brighton.

10th May, 1905.

Dear Sir,

Thank you for your letter dated the 9th May. I wired you this morning :

"Would prefer your Firm having my Patents Must know Saturday latest" Am willing to pay five pounds for cable for definite "answer".

You will agree with me that it is only right that I should know within the next few days whether your Firm wishes the first right to acquire my American Patents for the Natural Colour Cinematograph Patent as it is not fair to expect me to give your Firm first refusal open indefinitely and lose chances of having the patents acquired from other quarters.

I have already proved to you that my Patents are scientifically correct and Commercial by the result shown you in the Parlour Cinematograph, and you already know as a business man that such an article in itself in the United States would be a very money-making line and a complete novelty. The exhibiting of animated pictures in Natural Colours in public Halls would be a very large source of income and act in itself as an Advertisement to push the Parlour Cinematograph. There is no reason why the above colour contrivances should not give pleasure to thousands and reach every home like the phonograph.

I repeat my terms to your Firm as follows :-



[ENCLOSURE]

N. P. Co., Ltd.

I am willing to sell My American patents and all improvements on the same Patents outright for the cash sum of sixty thousand pounds, or if your Firm wishes to retain my interest in the Patents, I am willing to accept the sum of forty thousand pounds in fully paid shares (Limited liability) in any Company or concern that may work my Patents.

The above offer to your Firm only holds good up to midnight next Saturday, the 13th of May, and providing the sum of one thousand pounds is paid to be before the termination of the above date as a binding contract between myself and your firm.

If your firm accepts either of my offers as above, I expect the cash balance to be paid to me within a period of six weeks dating from the 13th of this month.

Provided your Firm decides by Saturday I will get the use of a Hall and show you results almost double life size in natural colours.

You may see a notice of my Invention in the principal papers on Saturday.

Trusting this letter will be satisfactory to your honoured self and Firm

I remain,

Very truly yours,

(Signed) W. W. LASCELLES DAVIDSON.

J. H. White, Esq.,  
Managing Director,  
Edison Manufacturing Co. Ltd.,  
25, Clerkenwell Road,  
London, E.C.

THOMAS A. EDISON, PRESIDENT.  
W. E. GILLMORE, VICE PRESIDENT.

ADDRESS YOUR REPLY TO THIS COMMUNICATION TO ORANGE, N.J.

J. F. RANDOLPH,  
SECRETARY AND TREASURER.



# EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N.J.

EDISON PRIMARY BATTERIES AND FAN MOTOR ~~OUTLETS~~  
EDISON PROJECTING KINETOSCOPES AND FILMS  
31 UNION SQUARE.

IN REPLYING ADDRESS THE COMPANY  
AND MENTION THESE INITIALS

~~EDISON MANUFACTURING CO.~~ NEW YORK.

304 WABASH AVENUE, CHICAGO.



*Orange, N.J.* May 22, 1905.

Frank L. Dyer, Esq.,

Laboratory.

Dear Sir:

Referring to the attached papers, will you not send and secure copies of the American patents referred to--No. 676532, dated June, 1901, in the name of W. N. L. Davidson, and patent No. 193673, dated February, 1904, in the names of Jumeaux and Davidson. I think, possibly, there was a mistake made in this number, but you may be able to secure the right patent.

Please return all papers after you have secured the patent;

Yours very truly,

Vice-Pres. & Gen. Mgr.

WEG/IWW

Enc-A

May 25th, 1905.

Wm. E. Gilmore, Esq.,  
Pres't - National Phonograph Company,  
Orange, N.J.

Dear Sir:-

Your favor of the 22nd inst. has been received with attached papers, relating to the invention of Messrs. Green and Davidson on the taking of animated pictures in color. A copy of the first patent referred to (No. 676,532 June 18th, 1901) has been ordered and will be sent you as soon as received. I have, however, examined the claims in the Official Gazette, and they seem to be very poor and of no breadth. The so-called second patent (No. 193,673, dated February 1904) to Jumeaux and Davidson must be a pending application, as the number corresponds with applications filed at that date. I will have a search made, however, so as to be sure that this patent has not been issued.

Yours very truly,

FLD/ARK.

*Have not been able to find second  
patent  
H. H.*

W. E. GILMORE,  
PRESIDENT & GENERAL MANAGER.  
J. R. SCHERMEDEMOOR,  
ASSISTANT GENERAL MANAGER.

ADDRESS YOUR REPLY TO THIS COMMUNICATION TO ORANGE, N. J.

J. F. RANDOLPH,  
TREASURER.  
EDGAR W. DENNISON,  
SECRETARY.



**NATIONAL PHONOGRAPH CO.**  
ORANGE, N. J.  
**EDISON PHONOGRAPHS & RECORDS.**

31 UNION SQUARE, NEW YORK.  
304 WABASH AVENUE, CHICAGO.

LONDON,  
PARIS,  
BERLIN,  
BRUSSELS.

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

CABLE ADDRESS  
"ZYNOTIC, NEW YORK"

*Orange, N. J.*

June 30, 1905.

Frank L. Dyer, Esq.,

Laboratory.

Dear Sir:

Here is a letter from Mr. Davidson, of Brighton, England, together with the copy of specifications of patent on Prism which he promised to send us some days ago. I do not know whether it amounts to anything, but send it along to you so that you can look it over, and I wish you would send it back to me with your opinion.

This matter is getting somewhat irksome, as I have had so many communications from White as well as from this gentleman direct, and I want to turn it down absolutely if there is nothing in it.

Yours very truly,

*W. E. Gilmore*

President.

WEG/LWW  
Enc-C

Mr. Gilmore was obliged to have E. Geo. signing the above letter dictated by him.

July 5th, 1905.

Wm. E. Gilmore, Esq.,  
c/o National Phonograph Co.,  
Orange, N.J.

Dear Sir:-

Your favor of the 30th ult. has been received, enclosing a letter from Captain Davidson, together with two copies of a pending application of Jumeaux and Davidson, relating to tri-chromatic photography.

In looking over this application, it strikes me off-hand that the description is very blind and obscure, and I would expect the Patent Office to require very considerable amendment before accepting the same, so that the patent, when granted, even if otherwise of value, would always be subject to the attack that the invention was changed after the filing of the application. Aside from this point, it would seem to me that the practical difficulties of securing even fair results commercially would be enormous, and the expense of the apparatus would be very great. Although color photography was suggested at least ten years ago, it has made practically no advance up to this time, and in the very nature of things, the moving picture art must always be many

W.R. Gilmore, Esq. - 2.

years behind the art of photography in general. It seems to me that the situation here presented is so obscure and indefinite and so clouded by the suspicious eagerness of Captain Davidson to get some ready cash for a simple option, that you would be perfectly justified in turning the proposition down absolutely, until some plain business-like and practicable suggestion is presented.

I return the papers herewith.

Yours very truly,

FLD/ASK.

**Legal Department Records  
Motion Pictures - Correspondence**

**Color Photography - Powrie, John H.**

This folder contains correspondence and other documents, including notes, drawings, patents, patent assignments, affidavits, and agreements. The selected items cover the period 1909-1915. Most of the correspondence is between Frank L. Dyer of the Legal Department and patent holders John H. Powrie and Florence M. Warner. There are also letters to and from Edison, along with other items bearing his marginalia. The documents deal mainly with Powrie's heliochromic screens and related photographic processes, including an automatic film-developing apparatus. Many letters relate to his experiments in Paris and to tests of his film samples by Edison's staff. One letter in Edison's hand concerns Powrie's use of the Galvanometer Room at the West Orange laboratory; others pertain to the commercial value of Powrie's dry plates and his relations with the Pathé Frères and Lumière companies. Also included are letters regarding the cost and discontinuance of Powrie's experimental work at West Orange.

Some of the correspondence concerns Willard C. Greene, a photographic experimenter in the West Orange laboratory who considered Warner-Powrie film impractical for Edison's kinoscope; Charles Brasseur, another inventor working on color photography; and Montgomery Vaddell, a former assistant to Edison. Other items relate to the products of the Lumière Co., including autochrome and panchromatic plates, and to consultations with Pathé Frères, including a letter by engineer Charles Bardsy regarding emulsification machines. There is also correspondence referring to the possible construction of a new film plant, as well as a letter of introduction for William C. Anderson of Detroit, a manufacturer of electric vehicles.

Approximately 60 percent of the documents have been selected. The unselected items include U.S. Patent 802,407, "Heliochromic Plate and the Process of Making the Same," issued to Powrie on October 24, 1905.

[PHOTOCOPY]

2nd September, 1909.

Frank DEER, Esq.,  
Hotel Majestic,  
Paris.

Dear Sir,

We confirm our various conversations of the past few days.

*Am. & Genl.*  
We are prepared to sell an exclusive license to exploit the process and the product covered by Letters Patent N° 802,471 issued for the United States of America the 24th day of October, 1905, and ~~the~~ <sup>a similar</sup> license to exploit the said process and product for the entire world, as applied to the manufacture of photographic films, photographic plates, cinematographic films, cinematographic plates and the making of photographs in colors therefrom.

We hand you herewith a draft contract prepared in the course of the negotiations which we have mentioned to you between us and "La Compagnie Générale des Phonographes, Cinématographes et Appareils de Précision" of Paris, France. We have explained to you the situation with reference to the negotiations which have been for some months pending with this company, and you understand why they have not yet been concluded by the execution of the contract. You will observe that this contract deals only with the license to make and sell films and plates for use in color cinematography. We offer this contract as a working basis for an agreement to be passed between us with reference



[PHOTOCOPY]

-2-

Frank DYER Esq.,

2nd September 1909.

to the royalties to be paid for cinematographic film and the general lines of an arrangement to be passed between us with reference to the exploitation of the product and the process for the entire world. In payment of such a license we ask the sum of Two Hundred Thousand Dollars (\$200,000.-) in Cash, to be paid at the time of the signing of the agreement. The royalties as to the cinematographic films and cinematographic plates to remain the same as set out in the draft contract herewith enclosed. Royalties on all other films and plates to be Sixty Cents (60 cents) per square metre of film or plate manufactured. We to have a guaranteed minimum royalty payable to us quarterly as follows:- 1st Year after the signing of the agreement Twenty Thousand Dollars (\$20,000.-) 2nd year: Thirty Thousand Dollars (\$30,000.-) 3rd year: Forty Thousand Dollars (\$40,000.-) 4th. and all ensuing years Fifty Thousand Dollars (\$50,000.-) per annum. This minimum royalty to be due and payable during the life of the United States Patent N° 802,471.

We will prepare ourselves to go to America on receipt of a satisfactory reply from you after conference with your associates for the purpose of spending a reasonable time in discussing the details and explaining the process and making such demonstrations as may be consistent with the state of the negotiations without the machinery for making the réseau which we have here in Paris.

[PHOTOCOPY]

Frank DYER, Esq.,

-3-

2nd September, 1909.

It is understood that you advance for the purpose of defraying the expenses incident to making this trip the sum of Five Thousand Dollars (\$5,000.-) and provide such materials as may be required in your laboratory, the expenses of any demonstrations that be required to be defrayed by you.

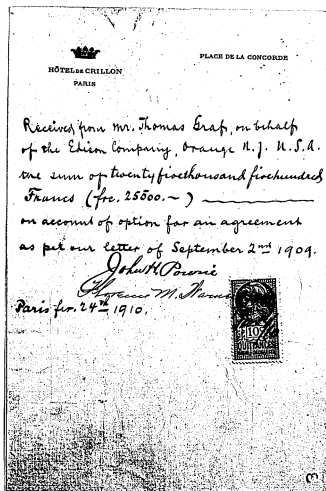
This we think covers the situation as outlined in our various conversations. We do not understand that we are offering you an option on the purchase of these rights or in any way restricting our right to dispose of them to other parties and for that reason we do not mention any time or date as a limit for the acceptance of the terms hereinabove outlined.

Faithfully yours,

Enc.

*Horace M.anner*  
*John H. Laurie*

[ATTACHMENT (PHOTOCOPY)]



Form 3

# **THE WESTERN UNION TELEGRAPH COMPANY.**

**24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**
ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
	2-30	

**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

To Zymotic 1159 Paris 9/21 190

orange nf

Mailing Saturday on

Mauritania, Powrie.

**RECEIVED**
**SEP 21 1909**
**FRANK L. DYER**
☒ READ THE NOTICE AND AGREEMENT ON BACK.

Form 3

# **THE WESTERN UNION TELEGRAPH COMPANY.**

**24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**
ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
	3-30	

**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

To Zymotic Orange Paris 10/8 19

Orange

Submarine incident caused

delay Letter samples

reach you positively within

ten days. Powrie

**RECEIVED**
**OCT 8 1909**
**FRANK L. DYER**
☒ READ THE NOTICE AND AGREEMENT ON BACK.



HÔTEL DE CRILLON



Paris, le 19 Octobre 1909

PLACE DE LA CONCORDE

Au Télé: "CRILLONHOTEL"

My dear Mr. Dyer

With all apologies for the unusual and protracted delay in forwarding the promised samples, - We beg to acknowledge your recent cable and letter to which we replied on the 9 inst. Samples and explanatory letter will reach you in ten days "Parvi".

We think from your interest in the matter that some further explanation of this delay is due you. Your experience however in affairs of this kind will enable you to understand, as in this instance that the success of a demonstration may be prevented through a misstep or carelessness in handling, apparently trivial, and not in any way related to the technique of the process.

As you will recall we had quite a number of bands of film completed



HÔTEL DE CRILLON

- 2 -

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

N<sup>o</sup> 10 Télég. "CRILLONOTEL"

or nearly so, with the color screen elements when you were at the laboratory and we delayed sending you samples when you sailed in order to procure a more suitable emulsion in order that the demonstration should be as satisfactory as could be expected under the conditions under which we have to work.

Miss Warner has already written you of the unexpected delay which arose through the death of Mr. B.'s son, and the accident to electrical installation. When we had properly resumed our work however and had coated our <sup>film</sup> with emulsion we decided to <sup>color</sup> sensitizing the bands before cutting and perforating. ~~as~~ This was due to the fact that we experienced some difficulty in handling the perforated



HÔTEL DE CRILLON

3

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

N<sup>o</sup> 1549. "CRILLONTEL"

bands in the subsequent operations.

The difficulty we had to contend with by so doing being the necessity to dispense with the red light in the darkroom, and even our very feeble green safe light being insufficient protection and affording very little light for handling in the cutting machine and the perforator.

After the cutting of the bands we found they would not perforate properly as they evidently buckled up or caught in the machine and were terribly mutilated, and it was only after spoiling considerable color film as well as plain celluloid to ascertain the trouble, we discovered that the cutters were about a millimetre too far apart and the bands therefore caught in the perforator buckled up finally broke.

Failing to set the cutters properly we had to send the machine back to



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tély: "CRILLONTEL."

4  
The constructors, who delayed us unreasonably long. Then followed further delay for rain, bad weather, and all the little incidental accidents that usually accompany an effort to make up for lost time by hurrying.

But during these delays we have not been idle and we have been making some experiments for the production of the screen on cellulose which is proceeding very satisfactory. we have a 10-foot sample of the non inflammable from the Am. Celluloid Co which is very good, although it stretches more than celluloid and does not have as good resistance in the breaking strain as celluloid.

We have also been very successful so far in our trichromatic process on the cinematograph film and hoped to have been able to send you with the samples





HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

N<sup>o</sup> 1147; "CRILLONHOTEL"

5  
promised a specimen of this positive made from our negative in colors but we will certainly be able to send you a short strip on Saturday's steamer and that is the Nametania sailing on the 23<sup>rd</sup>. We are quite enthusiastic over the success of our recent work in spite of the protracted delay, and we are sure you will forgive us for any prostration when you see all the material.

There is considerable activity in color cinematography over here but it seems to be confined to methods of an optical and mechanical nature for the registration of images and color filters or with two objectives on the effort to work the 3 color system "à la Smith-Urbain". There is nothing that can approach our process for

economy, as well as fidelity of the reproduction and the simplicity of manipulation, besides being applicable to all existing taking as well as projecting apparatus now in use without special attachments.

We will write you under separate cover a brief technical description, and some remarks relative to the samples we are sending you, and incidentally we will tell you that we have been quite successful in the production of a very rapid suitable emulsion ourselves, all of which is very valuable and very advantageous to the speedy success commercially of the enterprise.

Anticipating a favorable response after due consideration of the matter, and with kindest regards from us all.

Very Sincerely, Yours.

John H. Packer

For Warner Packer Process

P.D. Had intended mailing samples today, but will send everything <sup>out</sup> on Mauretan's Saturday. —  
German Patent was issued Sept. 27th J.H.P.

October 29, 1909.

Mr. John H. Powrie,  
Hotel De Crillon,  
Place de la Concorde,  
Paris, France.

My dear Mr. Powrie:-

Yours of the 19th inst. has been received and I am very glad indeed to hear from you, because it has been so long since I had had any word that I was afraid the promised experiments had failed.

I am very pleased indeed to hear that the samples were to be sent by the Mauretania, so that I should receive them tomorrow or Saturday. I will then take up the matter with Mr. Edison and will let you know just as soon as possible what decision is reached.

Believe me -

Yours very truly,

YLD/ARK.

Vice-President.

Form No. 3.

**WESTERN  
UNION**

*Cable Message*

**WESTERN  
UNION**

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NUMBER	SENT BY	RECD BY	No. OF WORDS	FROM
19 my 29	AT	15	Paris	

**RECEIVED** at 338 Main St., Orange, N. J. Telephone 90. Nov 8 1909

NOV 9 1909  
HARRIS L. LUTCH.  
TELEPHONED  
TO  
TIME 2:17  
BY J.C.

*gymnotic*  
*Orange (N.J.)*  
*Regret delay letter and*  
*samples mailed today*  
*conclusive evidence of*  
*practical results*  
*Powrie*



HÔTEL DE CRILLON

Paris, 10 November 19, 1909

PLACE DE LA CONCORDE

M. Tély: "CRILLONTEL"

Mr. Frank L. Dyer

Dear Sir: - In response to your last letter and cable received nearly two weeks ago, a cable in reply was sent, as follows.

"regret delay, letter and samples mailed today, conclusive evidence of practical results Paurie"

Up to now, you of course have not received these samples, for the reason that when we projected them, after sending the cable preparatory to mailing them to you, we felt that they were not quite what they should be notwithstanding that they technically demonstrated everything that we have been aiming to accomplish.

We concluded therefore after due deliberation that as you are to use them



HÔTEL DE CLILLON

H. L. D.

2

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tully: "CLILLON HOTEL"

There to illustrate a process of color cinematography to people who may not only be critical, - quite unfamiliar with the technique of the process, but will be expected to consider making a considerable investment to bring it into commercial use, that it would be unwise for ourselves as well as unfair to you to put into your hands material for which many apologies and excuses would have to be made. We know that our results are conclusive but we think that as we have disappointed you so much, a few days more in a little better shape are worth more than to risk the doubts and criticisms that might be expected from our hurried results.



HÔTEL DE CRILLON

J. L. D.

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

Tél. Télég. "CRILLONOTEL."

3

An apology is due you from the writer for having anticipated himself in cabling you, "samples mailed today" - which was done in all sincerity of intention so to do, and the letter written last week was not sent intending to mail it with the samples.

Now the situation is this:-

We are hampered by several mechanical difficulties that are aggravated by certain conditions under which we have to work and that would be of no consequence whatever in the commercial manufacture of the film. There are things that have nothing whatever to do with the rascan (screen) on the film, but to the subsequent operations of coating



HÔTEL DE CRILLON

4

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

N<sup>o</sup> 14. Tél<sup>g</sup>: "CRILLONHOTEL"

J.L.D.

with the emulsion cutting, perforating, sensitizing and drying as well as the taking and printing of the positives.

Further, - after having used up a considerable quantity of material and being obliged to make more research, we are now at work making more positives, and with out committing ourselves again to we hasten to assure you, that it is but a matter of a few days in our opinion when we will send you the results, much better than we have now.

We hope that the cable sent you has not, by any representations on your part through us put the





HÔTEL DE CRILLON

J. L. D.

5-

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. TUGY, "CRILLONOTEL",

matter in an unfavorable light.

We will cable you when, and on what steamer the samples leave, and write you fully in detail regarding them.

We have not shown any of our results to the Pathe people or to any one else and will not do so until we hear from you adversely.

They are manifesting unusual activity in our direction just now and have sent us a new perforator and several samples of emulsion, quite unmasked, and we do not wish to place ourselves or be put in a position where they can have any claim on us should we come to any arrangement with you, or we might have



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tély: "CRILLONVOTEL."

6

taken advantage of many facilities offered by them

With kindest regards from the  
Warner-Powrie — Process

Yours Very Sincerely

John H. Powrie

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

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ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

Flower, (John H. Pownie)  
C/o Amexco, Paris.

11/23/09.

Samples not received. Is there any hope of your sending them?

Dyer.

(Prepay and chg. E. Mfg. Co.)

**WESTERN  
UNION**

Cable Message

**WESTERN  
UNION**

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NUMBER	SENT BY	REC'D BY	NO. OF WORDS	FROM
69my	29	R	7	Paris

RECEIVED at 233 Main St., Orange, N. J. Telephone 90. Nov. 27 1909

*Zymotic* Orange (N. RECEIVED  
TO  
TOTAL 3072  
NY 2072)  
Will positively send  
samples  
Poursue.

EDISON MANUFACTURING COMPANY

Nov. 29, 1909.

Mr. John H. Powrie,  
Hotel de Crillon,  
Place de la Concorde,  
Paris, France.

Dear Mr. Powrie:

Yours of the 19th inst. has been received, and I am very glad indeed to hear from you even though you do not write as encouragingly as I hoped.

You are quite right in believing that the samples to be submitted ought to be in good shape and that it would hardly be wise to submit anything that will not stand the test of close criticism. When I submit the proposition to Mr. Edison I want to do so under the conviction that the process can be put into commercial use with very little experimenting, other than may be necessary to design and instal the necessary apparatus for carrying it out on a large scale. Of course I know that you and Miss Warner will do all that is possible to bring your experiments to a successful conclusion in the minimum time; but I can assure you that I am very anxious indeed to put the matter up to Mr. Edison in order that the question can be decided one way or the other.

I thank you very much for your assurance that you will not disclose the information to anyone else until we have had the

Form 100.

Mr. John H. Powrie.

EDISON MANUFACTURING COMPANY

(2)

11/29/09.

opportunity of passing upon the proposition, and I will try to  
possess my soul with patience until I hear finally from you with  
definite practical results.

Please give my best wishes to Miss Warner, and believe me,

Yours very truly,

F.L.D/IWW

Vice-President.

1509

HOTEL DE CRILLON  
PARIS

PLACE DE LA CONCORDE

Dec 4/09

Mr. Frank L. Byer

Dear Sir:- Just a line to  
acknowledge the receipt of  
your last cable

"Samples not received, is  
there any hope of getting  
them"

To which we replied,

"Will positively send samples"  
Paris

Notwithstanding the fact  
that we have not been able  
to send these samples up  
to today, we again reiterate  
there is no defect inherent  
in our process to prevent us  
from producing satisfactory

results and sending them to you, and it is certain that they will be mailed to you next week.

The only thing about the positives on celluloid and those on glass that differs in preparation of the prints is that owing to the fact that the color elements are in finer division than any other resin or glass screen that a special emulsion is required for this resin, similar to that employed on the Lumière Autochrome plate.

We projected our results in the lantern last night but we still withheld the



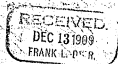
results for another steamer

For quality and economy  
in production nothing  
will be able to approach  
us on figures. I am sure  
and we think you will  
agree when you see the  
results.

With kindest regards

Yours Very Sincerely

John H. Payne



1509



HÔTEL DE CRILLON

✓ Paris, le Dec. 21st, 1909.

PLACE DE LA CONCORDE

M. Tully: "CRILLONHOTEL."

Mr. Frank L. Dyer,  
Orange, New Jersey.

My dear Mr. Dyer:-

We wish to acknowledge receipt of your letter of Nov. 29th and to inform you that we are sending you under separate cover in this mail some samples of the screen film and such photographic results as it has been possible for us to obtain under the present conditions of working. We have decided to send you these results for the reason that they are conclusive evidence that the screen film and photographic image can be properly united without difficulty and negatives taken and positives printed from them and subjected to the heat of the projection lantern without alteration, rendering a reproduction in colors approximately true to nature for the cinematograph.

Furthermore, we have reached a point where further progress is impracticable under the present conditions existing in this laboratory. We find, in order to secure uniform coating of the emulsion upon the screen film, which is the root of the present trouble, we shall be obliged to build a new machine, as our present apparatus is quite unsuitable for this purpose.

The variation in the thickness of this emulsion coating gives rise to other serious errors, aside from producing a variation in the densities of the photographic image, the thinner portions of the coating dry quicker than the thicker portions,



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. TUGY: "CRILLONHOTEL."

2 - Mr. Dyer.

and this is an important factor in varying the color sensitive-  
ness.

The portions which dry first, being more sensitive to  
the yellow and red.

We find furthermore that these variations are augmented  
by reason of our working with too small quantities of material,  
bands of film dried in a box being quite different from those  
dried in a large room, etc. and our present apparatus and limited  
space in which we have to work admits of no further improvements.

As we remarked in our last letter these are things that  
would not exist, and do not in a continuous manner of working,  
where the coating of celluloid film is turned out commercially,  
but are of a very serious nature for us where the experiments are  
conducted upon short strips of a few feet in length.

It has been our desire to produce some long bands for pro-  
jection, and we endeavored with this end in view to get the use  
of one of Pathé's machines for coating the narrow bands. Our  
screen film having been coated out and perforated, we found it  
impracticable to recoat it again, on account of the perforations  
letting the emulsion get on the back through which the exposure  
has to be made and it is difficult to clean off.

In reference to this matter we wrote Mr. Bardy, their  
engineer, to see if he could get a machine or suggest a method



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

*Ad. Téleg: "CRILLONHOTEL."*

3 - Mr. Dyer.

of improving the emulsifying.

We intended to rent or purchase such a machine, but find this out of the question. In his reply he advises us to have the bands coated by Pathé, and says he cannot ask them for such a machine, and advises proceeding on commercial lines, as he is satisfied we have abundantly demonstrated the commercial utility of the process, and in his opinion should now begin the installation of a factory for the manufacture of the screen, the emulsion being no obstacle, he naturally points out the advantages of an alliance with the Pathé Co. to effect this most expeditiously.

While our recent researches have been most valuable, we cannot but admit the truth of Mr. Bardy's statements, but find that it has rather precipitated a crisis in our affairs, and we are therefore obliged under the circumstances as we promised, to submit you these samples first and give you the opportunity of presenting the matter to Mr. Edison exactly as it stands. We cannot well accept the Pathé offer to coat our screen film and place ourselves under obligations to them, and then submit our first results to you.

We do not feel that it is necessary to make apologies for the imperfections appearing in the specimens, - the result of the conditions already referred to, and the dust and dirt from the engine and workshop that are attracted to the film by



HÔTEL DE CRILLON

Paris, le 19

PLACE DE LA CONCORDE

Ad. Télég. "CRILLONHOTEL"

4 - Mr. Dyer.

the static-electricity when being coated.

The samples we are sending we have marked as follows:

- B -

Color screen film for cinematograph. Has been coated with emulsion, cut and perforated, and emulsion washed off.

(With suitable machinery the narrow bands may be re-coated.)

This of course is an advantage not to be overlooked.

- A -

Color screen film with weak colors, capable of giving satisfactory color results with ordinary illumination.

- C -

Positive on normal color screen B, requiring extra illumination for projection.

- B -

- D -

Pieces of Negative film.

- E -

Finatype print, (made from plates).



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

*Ad. Tully: "CRILLONHOTEL"*

5 - Mr. Dyer.

C made from color screen negative of same subject as E.

If we are not mistaken you took with you some prints and specimens of our glass color screen plates, so we will not encumber the parcel with glass.

We are now at a point where we are prepared to go to America and demonstrate that our process of making color screen on film or glass is practical and commercial and to make such a demonstration as, <sup>that</sup> seen by Mr. Bardsy, and which he, as engineer of the Pathé Co. regards as sufficient to warrant the installation of an industrial plant and we are confident that both you and Mr. Edison will partake of his conviction.

We regret the long delay in arriving at this point, but have not felt satisfied until now that we had solved all the technical problems involved in order to put it into commercial use.

We have a finished machine for the manufacture of the color screen plates of 8" X 10" in size or under, - capable of making about 50 dozen plates per day (30 square metres).

We are prepared to construct a full-sized working model plant, to coat and finish color screen film of 11 inches in width and 150 foot lengths or under, similar to our small model in use



HÔTEL DE CRILLON

Paris, le 19

PLACE DE LA CONCORDE

M. Tely: "CRILLONHOTEL."

6 - Mr. Dyer.

here. This will cut into eight (8) cinema bands.

We approximate the cost of material required for coating with color screen the glass or celluloid, exclusive of the labor, the support itself and the emulsion, the cost of the plant or investment and incidental running expense to be approximately Five Dollars \$5.00 per 1000 plates 8" X 10" in size, i.e. 333 dozen 4" X 5" plates, or over 4700 running feet of cinematograph film.

This sum added to the cost of labor and incidental expense, etc., etc. for its preparation upon the ordinary photographic plate and film cost price will give the cost of the color product.

The labor required for handling the plates or film in large quantities can be made semi-automatic and should be comparatively small. Sufficient to say from what you have seen and read of the process and what you know can be accomplished industrially, we allow you to judge that there is no process of color photography that can approach ours in economy of production.

Incidentally we will tell you that we have done some work upon a method of cinematography in color that involves the use of the color screen negative, from which however upon a single positive film without this color screen, it shall be possible to produce automatically and by natural color selection, a fairly correct reproduction of the original color, and at a figure probably



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

*Ad. Telys "CRILLONHOTEL."*

7 - Mr. Dyer.

below that at which Pathe can do the machine coloring. This will admit of being projected with apparatus of much lower illuminating power.

Mr. Harper has made a translation for us of Mr. Bardy's letter, which we enclose at his suggestion. Kindly treat the communication of Mr. Bardy as confidential and return the original to us, at your earliest convenience.

We are telegraphing you to-day as follows:

*Zymotic Orange, New Jersey -  
Mailed Samples steamer New York reach you  
thirtieth - Powrie -*

Notwithstanding this reaches you in the middle of the holiday season, we ask you to be as prompt as possible in giving us a reply, for we are now ready to form an alliance and needless to say we would prefer it in America, and should like to have it come through you.

Mrs. Warner joins us in extending the season's greetings, and we wish you many of them.

Very sincerely,

*Flora M. Warner*  
*John H. Powrie*



[ENCLOSURE]

TRANSLATION.

30, rue de Miromesnil

Paris, December 18th, 1909.

Miss Florence Warner

Mr. J. Powrie.

By your letter of 14th inst. you ask me to give you my opinion on the subject of your work. This is my reply.

You have arrived after a long effort and labor, to which it gives me pleasure to render homage, in creating a method for the manufacture of fine réseaux colored on celluloid, <sup>(screen?)</sup> which nobody has been able to do up to this time. I have no

doubt of the practicability of the industrial realization of such <sup>of</sup> réseaux, the machines for making them being simple and easy/construction.

With your rudimentary material which you have used in my laboratory you have produced negative and positive images which leave no doubt of the realization of color photography by the aid of these <sup>screens</sup> réseaux. These proofs are without doubt still imperfect, but these imperfections must be attributed not to the method, but to a number of causes independent of the method, such as dust existing in an unpurified atmosphere, machines of the most rudimentary type, and above everything else, a lack of suitable emulsions.

Now to make good sensitive emulsions to obtain with your <sup>screens</sup> réseaux good negative and positive proofs, it is indispensable to be able to give them not only a great sensitive-ness, but also to make them with a very fine grain, a very small quantity of gelatine and a very high percentage of silver. These

[ENCLOSURE]

- 2 -

emulsions, which it is possible to make industrially by an experienced operator, are exceedingly difficult not to say impossible in a laboratory having no sufficient means of refrigeration and not allowing operation upon a sufficiently large quantity of material. Everybody who makes these emulsions knows that it is impossible to prepare good emulsions without working on many kilograms at once. It would then be to lose valuable time to try to push further your work under the conditions in which you find yourselves. What you have done and the results you have obtained show most abundantly that you have solved the problem. That is why I think that now only an industrial installation can furnish results equal if not far superior to anything known to-day. The Rathé Company would <sup>be</sup> willing to coat with its emulsions your little bands fitted by the ~~serres~~ <sup>réseaux</sup>, because it possesses the necessary machinery for this work, but for special reasons which are not for me to pass upon, you have not thought that you could accept its offer, and it is not possible for me to ask the Company to loan you one of its machines nor even to give a description thereof, without its authorization. This Company moreover, with its splendid equipment, has every facility to construct and install rapidly all the material which would be necessary for you.

This answers I believe fully the question in your letter with reference to the coating of bands in small sizes.

Yours truly,

(SIGNED)

Charles Bardy.

Jan. 12, 1910.

Mr. John H. Powrie,  
Hotel De Crillon,  
Place De La Concorde,  
Paris, France.

My dear Mr. Powrie:

Your favor of Dec. 21 was duly received, together with the various samples referred to therein, and I wish at the present time merely to acknowledge receipt, and not make a definite report. At the same time it is due you to say that the situation does not look as favorable as I hoped it would when I was in Paris.

In presenting the matter to Mr. Edison, and running over the various papers with him, his mind instinctively centered upon the request made by Mr. Pathe that a sample of a moving picture positive several yards in length should be submitted, for the consideration of the directors.

Unfortunately, there was no sample of a moving picture negative, or at least a print therefrom,

Page 2,  
Mr. John H. Rowrie,  
Jan. 12, 1910.

but only the print of a still life picture, and this was hardly long enough to give very much of an impression as to the effect.

I told Mr. Edison that you realized the difficulty of getting emulsions that were sensitive enough to the colored rays at the high speed necessary in motion photography, but he seems to feel that these difficulties are very much greater than you apparently anticipate. As a matter of fact, he seems to feel that the production of the screen was only a very short step toward the ultimate solution of the entire problem.

In this connection, I might say that he spoke in the most complimentary terms of your screen, and said that it was enormously superior to anything of the kind he had ever seen before. I do not make this as a final and definite report, because one of Mr. Edison's photograph experts is at the present time looking more closely into the question of the speed of emulsion, and he may find that Mr. Edison's fears in this respect are without foundation. At the same time, I think I should be entirely frank with you and tell you just what the present situation is, but I hope most sincerely that the experiment which Mr. Edison will have made will convince him that at least a

Page 3,  
Mr. John H. Powrie,  
Jan. 12, 1910.

good ground for hope exists in the developments of  
the process from a commercial point of view.

It is interesting to note that in discussing the question of color photography with Mr. Brasseur the other day, I mentioned to him the difficulties which might be expected in connection with the slowness of emulsion, and he assured me that he did not anticipate any particular difficulty in that direction.

In this respect of course Mr. Brasseur's opinion coincides with your own. As soon as I hear from the expert who is making the experiment for Mr. Edison, I will let you know, and you can rest assured that this will be just as soon as possible.

Please give my best regards to Miss Warner,  
and believe me,

Yours very truly,

Vice President.

WLD/WH

Jan. 14, 1910.

Mr. Frank L. Dyer,  
Edison Manufacturing Co.,  
Orange, N. J.

Dear Sir:

In compliance with Mr. Edison's and your request, I have made several preliminary experiments with the Warner & Swartz film screen submitted, and present the following data for your consideration of the practical operation and adaptation to the present Kinetoscope service. I wish to state that these findings are not to be considered final nor complete, but sufficient to indicate the general difficulties to be encountered.

On January 13th, at 11:30 A. M. (no direct sunlight), using a Lumiere Panchromatic & extra rapid dry plate (probably a more sensitive surface than sensitized film would be), and a Goertz Series III, No. 5 Anastigmat lens, the four following exposures were made to check other previous exposures:

- No. 1. Panchromatic G only  
lens aperture F-22  
1/10 second.
- No. 2. Panchromatic G plus W.-P. screen  
lens aperture F-22  
1 second
- No. 3. Panchromatic G plus W.-P. screen with  
compensating filter,  
lens aperture F-22  
8 seconds
- No. 4. Panchromatic G plus W.-P. screen plus  
compensating filter  
lens aperture F-8  
1/10 second

These four exposures were developed singly, usually with normal Pyro-Soda developer under normal conditions. The results were made under conditions equal to that. The exposure ratios permit of at least an approximate estimate of the speed relation of the color process to the monochrome process. I wish to emphasize that while short exposures are perfectly possible with lenses working at the extreme apertures of F-3.5 to F-5, it has been found impractical to use such apertures in general Kinetoscope work, as the negatives have insufficient sharpness due to the small depth of focus of lenses working at such large apertures. To obtain the requisite sharpness, apertures from F-8 to F-16 are necessary. Also, in color work an error of over 30% is decidedly a critical condition and the percent of failures therefore would be much greater than with the present routine work.

An extremely important point to consider is the adherence of the gelatine emulsion to the film. It has not been determined if the screen per se would exert an unfavorable influence upon the adherence. Gelatine emulsion will strip from collodion unless the film is specially treated, and considerable experimental work would be necessary with the W.P. screen to determine the most advantageous treatment.

With color prints an additional fine grained emulsion, more rapid sensitizers, compensating filters of lower extinction coefficients, more rapid shutter devices, positive printing, de-sensitizing for development, etc., etc. I have not undertaken to give special consideration in this report. Respectfully yours, *William L. Kieckhefer*

EDISON MANUFACTURING COMPANY

Jan. 20, 1910.

Mr. John H. Poirie,  
Hotel de Grillon,  
Place de la Concorde,  
Paris, France.

My dear Mr. Poirie:

Some days ago Mr. Edison's photographic expert, Mr. Willard C. Croome, submitted a report on the subject of persons in taking moving pictures under the conditions of color photography. This was the special point that Mr. Edison entertained the most serious doubts about. I now beg to enclose a copy of Mr. Croome's report and also of the photographs he refers to.

I do not pretend to understand the point that Mr. Croome makes, but I refer the matter to you because I know that if these objections are not well taken you are probably the best man in the world to answer them. Will you look over this report of Mr. Croome and consider it carefully and let me know in detail what you think his objections amount to. I will then take up the matter with Mr. Edison, and so far as I can tell he is favorably inclined to the general proposition provided we can convince him that a reasonable chance exists for overcoming these difficulties.

PML/INT

Yours very truly,

V. P.



# POSTALTELEGRAPH



## COMMERCIAL CABLES

Date.

Telephonat

By

Times

REGISTERED TRADE-MARK, DESIGN PATENT NO. 38389.  
The Postal Telegraph Cable Company (Incorporated) transmits and delivers this message subject to the terms and conditions printed on the back of this blank.

NUMBER	SENT BY	REC'D BY	CHECK
16	W	gpm	36 L. French

Received at

From Paris 21

to Rhythmic

Orange

273 Main St. Between Day & Centre St  
Telephone 200. \*2 / Orange 770

Color Cinematography absolutely demonstrates  
have sensitized twenty meters Eastman  
film fully timed negative made by  
taking twenty exposures per second by  
through our color screen can  
demonstrate same for you with  
emulsion on screen

No Inquiry respecting this message can be attended to without the production of this paper. Repetitions of doubtful words should be obtained through the Company's offices, and not by DIRECT application to the sender.

Form No. 260.

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ROBERT C. CLOWRY, President and General Manager.

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		✓

**SEND** the following message subject to the terms  
on back hereof, which are hereby agreed to.

Jan. 21, 1910.

Flower. (John H. Bourne)  
C/o Amparo, Paris.

Sent expert's report last night. Doubts success due to  
slowness and omission and screen adherence. To demonstrate  
success, can you send twenty meters moving picture negative  
of moving objects twenty per second, and positive colored  
print of same with omission on screen?

Dyer.

(Chg. Rec. 17) READ THE NOTICE AND AGREEMENT ON BACK. 23

Jan. 21, 1910.

Mr. John H. Bourie,  
 Hotel de Crillon,  
 Place de la Concorde,  
 Paris, France.

My dear Mr. Bourie:

I am in receipt of your cablegram of the  
 21st, reading as follows:

"Color cinematography absolutely demonstrated.  
 Have sensitized twenty meters Eastman film. Fully tinted  
 negative made by Raths. Twenty exposures per second through  
 our color screen. Can demonstrate same for you with emul-  
 sion on screen."

I immediately sent for Mr. Edison's photographic  
 expert, Mr. Greene, whose report I sent you last night, and  
 showed this cablegram to him. He was naturally more or  
 less skeptical, as I find that he is very firm in the opinion  
 that the difficulties pointed out by him in his report are really  
 very great. It occurs to me that the only thing to do was to  
 have you make the demonstration you referred to and I have  
 therefore cabled you as follows:

"Sent expert's report last night. Doubts success  
 due to slowness and emulsion and screen adherence. Demon-  
 strate success, can you send twenty meters moving picture  
 negative of moving objects twenty per second, and positive  
 colored print of same with emulsion on screen?"

I hope that you will be able to do this without undue

John H. Powrie.

(2)

1/21/10.

EDISON MANUFACTURING COMPANY

difficulty, because it would make my task of presenting the whole question to Mr. Edison in a favorable light much easier. I do not want to have anything turned down that may later on develop in the hands of our competitors, and I still have a very strong faith in all that you and Miss Warner told me in Paris. At any rate, whatever may be the outcome, I am doing all that I can to have the process presented here in the most favorable light.

Yours very truly,

FLD/IW

Vice- president.

POSTAL TELEGRAPH



COMMERCIAL CABLES

Duplicate of  
Telegram Telephoned.

CLARENCE H. MACKAY, PRESIDENT.

**CABLEGRAM**

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No. 14 Time my gm Check 3 Route Via Via French

Send the following Cablegram without receiving, subject to the terms and conditions printed on the back hereof, which are hereby agreed to.

To Paris 22  
Lyonic Orange

273 Main St., Between Day & Centre Sts.  
Telephone 200. \* Orange, N. J.

Cannot. as we have not facilities used  
by paths also possessed by you in Orange.  
where everything can be fully demonstrated  
later on. America please decide  
on receipt  
Pawie

The sender will please read the conditions on back and sign name and address thereon for reference.

THE POSTAL COMPANY'S SYSTEM REACHES ALL IMPORTANT POINTS IN THE UNITED STATES AND BRITISH AMERICA, AND VIA COMMERCIAL CABLES, ALL THE WORLD.



HÔTEL DE CRILLON

*Paris*, January 23rd, 1910

PLACE DE LA CONCORDE

*M. Julez: "CRILLON HOTEL"*

Mr. Frank L. Dyer,

My dear Mr. Dyer:-

We wish to acknowledge receipt of your letter of January 12th, in which you say that Mr. Edison apprehends the difficulty of obtaining sufficient sensitiveness in the emulsion for moving pictures are greater than we think for, and that the making of the color screen is but a short step toward the solution of the problem.

In our researches throughout Europe for colors for filters, for emulsion and for sensitizers, we have gone to the fountain head to investigate and obtain what we needed and have had the assistance of the most expert chemists in the preparation of color-sensitizers as well as emulsion, and are thoroughly equipped not only to demonstrate all we have claimed, but are ready to commence the construction and installation of a plant for the production of color screen film for the hand camera or the cinematograph and a practical scheme for plates and paper pictures in color. On the evening of July 19, 1908, we exhibited before the French Photographic Society some of our color screen plate pictures, one of which was the figure of a man jumping over a flower bed, the exposure having been made in less than a twenty-fifth of a second, the emulsion used was not faster than that made by Cramer Dry Plate Co. - Seed Co. - or Eastman film, but by the sensitizers and the physical treatment of the plates the color sensitiveness was augmented to such a degree that the use of a compensating



HÔTEL DE CRILLON

Paris, le 10

PLACE DE LA CONCORDE

N<sup>o</sup> 1149, "CRILLONHOTEL"

- 2 -

filter was rendered unnecessary.

This and other specimens were subsequently exhibited before the Royal Photographic Society in London, and attracted much attention throughout the entire photographic world as demonstrating the possibilities of color cinematography by means of our screen plate if it could be applied to film.

One of the engineers of Pathé Co. was present and saw the slide projected and asked for an interview with us afterward. We did not see him at that time, as we left for Munich a few days after, where he wrote us urging the importance of his business with us.

When we returned to Paris and had a meeting with Pathé Co. the following spring, it was not a question of rapidity of the emulsion so much as the fineness of the screen that would obtrude itself on the pictures when they were projected.

We further told Pathé that we preferred a deal that would take over by one concern the entire business of making color plates and films both for the hand camera as well as cinematograph, and we asked him to make us a proposition.

He assured us there would be no difficulty about handling the whole thing, but he must have something to show to the board of the Cinematograph Co.

After two months of work in experiments to determine whether



HÔTEL DE CRILLON

Paris, le ..... 19

PLACE DE LA CONCORDE

M. Tully, "GRILLONNET",

- 3 -

we could put the color screen on celluloid, we decided that success would only be obtained by the construction of special machinery for the purpose and some considerable time in experiment. Before we would go into it, we wished an understanding with Pathé and his board, and a meeting was held and the specimens exhibited and the affair thoroughly gone into.

The board was divided in its opinion as to taking up the whole thing, but they were unanimous in considering the scheme for the cinematograph in color and offered us all facilities to prosecute experiments. The question of rapidity by emulsion and fineness of screen were the main points on which the success of the project hinged, and we agreed to demonstrate these things.

Two months more of experiments followed to demonstrate that the screen upon celluloid was possible and could be made sufficiently fine as not to mar the projected image.

We had finally succeeded in demonstrating both of these things. In the first place it takes a 600 line color screen for the standard lantern slide and the cinematograph image is fully 10 times as small; for the same size image in projection we need a screen on the film 10 times as fine. As to the speed we suggested that Mr. Pathé sensitize some Eastman film and have his engineers take a negative upon it, interposing our color screen behind the objective; this was done and as we cabled you some twenty metres of film were exposed at about 20 per





HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

*Ad. Tely: "CRILLONTEL."*

- 4 -

second, and a piece of this film we enclose. We projected an impression of our screen model on celluloid showing that the screen was sufficiently fine being 16 times finer than that of the glass plates.

Mr. Pathé and his engineers expressed great satisfaction at the result and a committee of the board met us to discuss the conditions of a contract, Mr. Ivatts arguing that before any money should be paid down by the Company they should see three metres of positive film in color projected before them, the negative being taken in Mr. Pathé's presence.

They agreed to supply all facilities to further the experiments and a suitable negative emulsion as fast as that of Eastman Kodak Co. as well as the positive emulsion.

We proceeded at our own expense to work out the details of the process of making the film, preferring not to go to Vincennes, and established ourselves in the Laboratory at 30 rue Miromesnil in Paris. Nearly six months of work followed in the perfection of the apparatus and making the screen on celluloid, bringing us to the moment of your arrival upon the scene.

The Pathé Co. have loaned us apparatus and frequently supplied us with samples of negative and positive emulsion, some of this emulsion has been specially made for us and much of it, all the negative



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. M<sup>rs</sup>: "GRANDHOTEL"

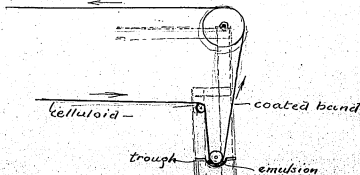
- 5 -

emulsion in fact supplied from Photographic dry plate manufacturers has been their commercial product intended for coating glass plates.

Now the difficulty at this moment existing in our correspondence is largely due to the fact that we have not given you a clear understanding of the situation, and we ask you to pardon us if we go a little into seemingly unnecessary details in order to leave nothing vague or obscure with regard to this affair.

The Cinematograph Company of Pathé have themselves facilities for coating bands of celluloid 22 inches wide and also narrow bands the width of the cinema film, which have already been perforated, the coating being applied between the perforations.

The apparatus employed for coating the large bands applies the emulsion upon the underside of the film, which passes under a roller running in an emulsion trough





HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tely, "CRILLON HOTEL."

- 6 -

as we have illustrated herewith. The essential points in coating celluloid in this manner being the height to which the film rises, the consistency of the emulsion and the speed at which the band travels in determining the thickness of the coating.

The other machine used by Pathé is of different construction and coats upon a different principle, - emulsion thinner in consistency being employed giving the same amount of, or thickness of emulsion on the film.

Emulsion suitable for coating glass plates does not have the consistency suitable for coating upon celluloid as the emulsion is spread upon the plates upon the face or upper side in a level position.

The preparation of a highly sensitive negative emulsion for coating on celluloid is much more difficult to apply of the required thickness upon the celluloid than it is upon glass.

An emulsionist who can make a very good emulsion of the consistency required for coating glass plates always finds that his method of treatment in the preparation of the emulsion has to be altered in order to secure the same high sensitiveness if this emulsion is to be coated upon celluloid.

Now recently Pathé have prepared themselves very rapid negative emulsion for coating in their small machine for the cinematograph bands, and we have also learned they have secured an expert in color



HÔTEL DE GRILLON

Paris, le \_\_\_\_\_ 10

PLACE DE LA CONCORDE

N<sup>o</sup> 14. Télég: "GRILLONHOTEL".

- 7 -

photography and are prepared to take our screen film and make this demonstration themselves.

Mr. Marette sent us some of their negative emulsion which we tried and found while it was sufficiently sensitive for color cinematography was too thick and we sent out a band we had coated to show them that we could not hope to get a strong enough image with such a thin coating.

They telephoned in to the laboratory for Mr. Bardy and asked him to bring the emulsion out to them, when he returned he brought with him several metres of cinematograph film properly coated with this emulsion, and he showed it to us saying, "why will you not send your film to them and let them make the demonstration they have asked for and which they are anxious to do."

We have agreed to give Mr. Bardy some of our film to be coated next Saturday, but of course we shall not be able to get their results and send them to you.

Now the situation is this, we have a process for making this screen film and rendering ordinary rapid emulsion - such as can be obtained commercially, - sufficiently color sensitive to take moving pictures through our color screen, but we have neither a suitable place to coat our screen film with emulsion and sensitize it subsequently or a suitable machine to coat it if we had the place and the emulsion.

On the other hand besides the Pathé Co. there are several



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

*At. Tully: "CRILLONHOTEL."*

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firms here in Europe who have such facilities to make and coat celluloid film similar to the Eastman Kodak Co. or Anthony & Scovill. They of course will not co-operate with us to make a demonstration for a competitive house.

Now you people are certainly sincere in this affair and we would rather deal with an American firm, than with a foreign house on the whole proposition, and while we will positively not agree to go into any prolonged unnecessary experiments which we do not think you expect or would ask of us, we are willing to do as much for you in Orange as we have agreed to do for Pathé or any one else.

The construction of a rudimentary apparatus suitable for coating our prepared screen film should not take more than two or three weeks, and you certainly have or should be able to provide a suitable place for coating sensitizing and demonstrating the production of moving pictures in colors on our prepared bands.

As to the emulsion if you cannot obtain such an emulsion as is required and which can be made by Cramer Dry Plate Co. or Anthony & Scovill, you certainly can get an emulsionist who can with our assistance prepare such emulsion, which we will subsequently render highly color sensitive and coat upon the screen film, employing our sensitizer to attain this result.

To carry out this plan you should provide us with an absolutely dark room, 10 or 12 feet wide by 18 or 20 feet in length, furnished with a long laboratory table on one side, equipped with sink



HÔTEL DE CRILLON

Paris, le 19

PLACE DE LA CONCORDE

*Ad. Tilly: "CRILLONHOTEL."*

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and running water and provided with gas and electric light; we would install the coating apparatus, sensitizing and drying box, the latter should have an electric ventilator and electric heater. The coating machine is a simple wooden frame work of rollers and pulleys operated by a small electric motor. This would incur an expense of a few hundred dollars, and we will go to Orange and demonstrate our process of making screen film, and bring some of our prepared film which we will emulsify, sensitize and expose with your assistance and make a few yards of moving picture film in colors.

By energetic work this should not take more than three or four weeks to carry out during which time some agreement could be reached on the proposition.

In order to do what you have asked we should be obliged to find some place in Paris or elsewhere and have it equipped as described which you will agree would be an unnecessary waste of time for both of us.

Your reference to screen adherence we take it, is lack of adherence to the film of the screen or of the emulsion to the screen.

We have bands of film made over six months ago which have been coated with emulsion, cut, perforated, exposed and developed, - washed, fixed and dried, wound and projected and repeatedly rewound without showing the slightest tendency to separate. The adherence



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

Ad. Tully: "CRILLONHOTEL"

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and refractive index of the screen, varnish, and emulsion is perfect.

Please let us have your final decision by cable as soon as possible.

With kindest regards, we are

Very sincerely,

*Robert Millard*  
*John H. Brown*



HÔTEL DE CRILLON

Paris, le Jan. 25 1910

PLACE DE LA CONCORDE

M. Tully: "CRILLONHOTEL"

My dear Mr. Dyer

Notwithstanding the lengthy letter we have just written you I wish to add a few more words.

Mrs Warner has suggested that if you wished some further corroboration of the demonstration made by Pathé by sensitizing Eastman film and exposing through our color screen, it would be well to cable Harper to interview Pathé's engineer for you, and either he or Mr. Connor could see the film and get the engineer's corroboration of the experiments; we could arrange a meeting between them I think for the purpose.

I am much surprised at the opinion expressed by your expert with so much evidence in existence that the required speed in emulsion can be obtained commercially for taking moving pictures in colors.

The Panchromatic emulsion of Wratten and Wainwright of Croydon England is fast enough to take 3 successive exposures through a red a green and a blue color filter in  $\frac{1}{10}$  of a second, and certainly the exposure through our color screen film is no longer than through the slowest one of the





HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tilly: "CRILLONOTEL"

three filters which is generally red or green as the blue only takes about  $\frac{1}{2}$  as long as red or green in daylight.

In the Smith-Herbau process where two filters only are used red and green the two exposures are made in  $\frac{1}{50}$  of a second if the shutter takes  $\frac{1}{10}$  of a second in each one that leaves  $\frac{1}{5}$  of a second for each alternate exposure in actual time. The advantage of the color screen film is that the total length of exposure is no longer than through one filter alone.

By re-sensitizing the Autochrome plates we can take exposures on Autochrome plates at  $f/4$  in  $\frac{1}{25}$  of a second.

We have a cinema objective for our work with an aperture of  $f/2.5$  with which moving pictures in color should be possible by artificial light in the theatre.

Yours Very Sincerely,

John H. Pomeroy

EDISON MANUFACTURING COMPANY

Feb. 1, 1910.

Mr. John M. Rowrie,  
Hotel de Crillon,  
Place de la Concorde,  
Paris, France.

Dear Mr. Rowrie:

Your cablegram of the 22nd ult. came duly to hand, and I have delayed answering you because I thought it wise to wait until you had had the opportunity of considering Mr. Greene's report. By this time you have probably received the report and have formed some idea as to the seriousness of the criticisms that Mr. Greene sets forth. I have therefore cabled you to-day as follows:

"Have you received expert's report? If so, how serious are criticisms?"

I will expect to hear from you telling me just what you think of the points that Mr. Greene raises and whether you regard them as difficulties that can be practically overcome.

Yours very truly,

WJD/177

Vice-President.



HÔTEL DE CRILLON

*Katin* Paris, 10<sup>th</sup> Feb. 1 1910  
*Jein*

PLACE DE LA CONCORDE

Ad. Télég: "CRILLONOTEL."

My dear Mr. Dyer

We are just in receipt of your letter of Jan 20 enclosing Mr. Green's report, to which we reply, as you request.

In the first place, Lumière's C panchromatic plates while they may be considered as fairly rapid plates for use by the Commercial photographer in trichromatic work, are not a standard to judge the possibilities of color cinematography.

The Panchromatic plates of Dr. Watson & Wainwright of Croxden England would be much faster, but I doubt if they are obtainable in New York City.

Mr. Green parenthetically remarks that the Lumière plates are — "probably a more sensitive surface than sensitized films would be."

Either plates or films sensitized by bathing, which we propose to do in a commercial manner under special conditions for attaining the best and most uniform results, gives a rapidity and sensitiveness to color far ahead of any method of preparing panchromatic emulsions.

It is not to be expected however that



HÔTEL DE CRILLON

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Paris, le 19

PLACE DE LA CONCORDE

Ad. Tely. "CRILLONHOTEL."

Mr. Grune or any one else could give you a satisfactory or intelligent report upon the possibility of taking moving pictures without the sensitive material which was actually to be employed and fully informed as to the conditions under which it was to be used. That is to say with a proper equilibrium established between the color elements of the screen and the sensitive emulsion.

This is done with a compensating filter and the emulsion may be rendered so sensitive to the colors as to dispense with its use.

As an expert therefore Mr Grune should have known that he was unable to make such a report without the sensitive surface to be employed and a properly adjusted compensating filter, and in this respect it is therefore valueless.

He further states that:-

"It has been found impractical to use such apertures (F 3.5 to F 5) in general kinetoscope work, etc....." and advocates



HÔTEL DE CRILLON

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Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

N<sup>o</sup> 7119: "CRILLON HOTEL"

the use of apertures from  $f/8$  - to  $f/16$  as being necessary.

An inquiry of Mr. Morette and the lead operator of the Pathé Co at Vincennes this afternoon gives us the positive information that all of their work is done with lenses having apertures of  $f/3.5$  and  $f/4$ . I also returned the remark that I had understood from a photographic expert that lenses of such large apertures were not practical in moving picture work and that only apertures between  $f/8$  and  $f/16$  could be employed on account of lack of sharpness.

His engineer replied, "If he said that he is not an expert, but a 'concierge'" and I was shown some excellent results taken at an aperture of  $f/3.5$ .

I asked for a short piece of ordinary negative film with which I made an exposure with our special lens having an aperture of  $f/2.5$  a piece of which I



HÔTEL DE CRILLON

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Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. TING, "CRILLONOTEL"

enclose and you will see leaves nothing to be desired for sharpness.

The two tests No 2 and No 3 made by Greue were with apertures of  $f/22$  and are respectively 1 second and 8 seconds. The exposures under the same conditions of plates and screens and all other conditions other than the lens aperture would be as follows:—

No 2	No 3
$f/22$ 1 sec	$f/22$ 8 seconds.
$f/8$ $\frac{1}{8}$ sec	$f/8$ 1 second
$f/5$ $\frac{1}{18}$ sec	$f/5$ $\frac{7}{8}$ second
$f/3.5$ $\frac{1}{40}$	$f/3.5$ $\frac{1}{15}$ second
$f/2.5$ $\frac{1}{70}$	$f/2.5$ $\frac{1}{9}$ second

I am obliged to say therefore that Mr. Greue is either ignorant of the very important principles involved in the optics of and practice of ordinary cinematograph work or else he is greatly prejudiced.



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tully, "GRIGNOTEL,"

Dear,

I cannot understand why an experienced operator in color work should make any greater percentage of failures in color work than in black and white, for an amateur or a beginner I should expect this of course, but an experienced operator should have no excuse to increase the percentage of failures in exposure simply because he was doing color work and this is nothing less than absurd.

His reference to adherence, and remarks upon the emulsion etc are essentially features of the process, the colors and sensitizers and methods of making positives being so intimately associated with ~~the~~ <sup>our</sup> particular methods of working, and the investigation of which brought us to Europe that a reference to them is superfluous after what you have seen and know of our work.

As to discussing for development it is also entirely unnecessary as development of color plates and films is done by time and not examination, a short piece of film being developed in advance.



HÔTEL DE CRILLON

Paris, le \_\_\_\_\_ 19

PLACE DE LA CONCORDE

M. Tély: "CRILLONHOTEL"

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off the long roll as a test, just as is done in ordin-  
ary black and white work.

I do not wish to do Mr. Greue an injustice  
just as you have asked for a reply in detail  
and your evident sincerity in the matter, I  
am obliged to say that I consider  
Mr. Greue's report as worthless and mis-  
leading as far as it goes, though he states  
that it is not final or complete.

With kindest regards from the ladies and  
myself

I am Yours Very Sincerely  
J. H. P. Poiré

P.S. Have just received your cable as follows.

Have you received experts report, if so how serious are  
criticisms - Dyer

To which I have replied as follows.

Report valuations, as stereotyped film is several times  
faster than Lumiere's penchons plates. Cinema expert have  
contradicted necessity to employ small apertures, state must  
supported by excellent results taken with lens aperture thirty times  
faster than that used by Lumiere the last, other objections shown at  
the own process Poiré.



POSTAL TELEGRAPH



COMMERCIAL CABLES

CLARENCE H. MACRAY, PRESIDENT.

**CABLEGRAM**

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NUMBER	SENT BY	RECEIVED BY	CHECK
52	5-1	June 22	
FROM Paris		To Gynolic	
		Orange, 1	

Received at 273 Main St. Between Day & Centre  
(WHERE ANY REPLY SHOULD BE SENT)  
Telephone 344 City 2

Report values as sensitized  
film is several times faster  
than lumiere panchro plates.  
cinema expert here contradicts  
necessity to employ small aperture.  
statement supported by excellent  
results taken with lens aperture that

No Inquiry respecting this message can be attended to without the production of this paper. Repetitions of doubtful words should be obtained through the Company's offices, and not by DIRECT application to the sender.

POSTAL TELEGRAPH



COMMERCIAL CABLES

CLARENCE H. MACRAY, PRESIDENT.

**CABLEGRAM**

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NUMBER	SENT BY	RECEIVED BY	CHECK
FROM		To	
		Orange	

Received at 273 Main St. Between Day & Centre  
Telephone 344 City 2

times faster than that used  
by Greene no 2 test other  
objections eliminated by our process  
Pounce

No Inquiry respecting this message can be attended to without the production of this paper. Repetitions of doubtful words should be obtained through the Company's offices, and not by DIRECT application to the sender.

CABLE ADDRESS: "ZYMOTIC, NEW YORK"  
A. I. A. B. C. COMMERCIAL, UEBERS, HUNTING'S AND WESTERN UNION CODES USED.

TELEPHONE,  
1392 STUYVESANT.

TRADE MARK  
*Thomas A. Edison*

FOREIGN DEPARTMENT  
OF THE

NATIONAL PHONOGRAPH CO.  
EDISON MANUFACTURING CO.  
BATES MANUFACTURING CO.

10 FIFTH AVENUE.  
NEW YORK, N.Y.

FACTORIES:  
ORANGE, N.J. U.S.A.

EDISON PHONOGRAPHS  
AND RECORDS.  
EDISON PROJECTING KINETOSCOPES  
AND ORIGINAL FILMS.  
EDISON PRIMARY BATTERIES  
AND FAN MOTOR OUTFITS.  
BATES NUMBERING MACHINES.

LONDON, PARIS, BERLIN,  
BRUSSELS, SYDNEY,  
MEXICO CITY,  
BUENOS AIRES.

*New York, U.S.A.*

February 2, 1910.

1059  
Mr. Frank L. Dyer, President,  
National Phonograph Co.,  
Orange, N. J.

Dear Sir:

In accordance with your instructions, we cabled

"Flower, care Amexco, Paris," as follows:

HAVE YOU RECEIVED EXPERTS REPORT? IF SO HOW  
SERIOUS ARE CRITICISMS?

Yours very truly,

*asst. Mgr. Reuchart*  
Manager, Foreign Department.

S

Feb. 3, 1910.

Mr. Frank L. Dyor,  
Edison Manufacturing Co.,  
Orange, N. J.

Dear Sir:

As requested, I have reviewed the correspondence and material in re Warner-Powrie process, and in view of such give the following opinion as to the possible adaptability to the Kinetoscope work.

If Mr. Powrie has sensitized Eastman film so that it is equal in values to the Wratten-Wainwright plate he has produced a sufficiently sensitive surface for cinematography in colors.

Using color screen film without compensating filter (probably by incorporating a suitable yellow dye-stuff in the sensitizer) reduces the necessary exposure very materially but neglects the necessity of compensation due to variable light. These two conditions combined with the use of lens systems working at the external apertures of F-3.5 to F-4.5 would certainly permit of fully timed exposures.

If the question of adherence may be absolutely eliminated, as Mr. Powrie claims, the process in one to two years time ought to become a dangerous business proposition in the hands of a competitor.

Under the conditions specified above, I continue to doubt that the order of work done could approach the standard requirements of the Edison Kinetoscope film service for several years.

Also, I wish to emphasize the fact that there are today at least five other similar color devices perfected which likewise may be applicable to Kinetoscope film. Of all the

(2)

processes, one certainly cannot but admit the Warner-Powrie to  
be in the most advanced state of mechanical perfection to-day.

Yours respectfully,

*Stillard & Gould.*

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

**ROBERT C. CLOWRY, President and General Manager.**

Receiver's No.	Time Filed	Check

**SEND** the following message subject to the terms  
on back hereof, which are hereby agreed to.

Paris, Feb. 4, 1910.

Dyer,  
Montclair.

Eastman here soliciting proposition Powrie. Do  
you wish Powrie sail immediately Orange for  
demonstration off? Asks only five thousand dollars,  
without further obligation on your part.

Donnerfer.

**READ THE NOTICE AND AGREEMENT ON BACK.**

*32 are del. open  
Paris*

Dyer -

July 7 1910

If Powrie accepts perhaps you better  
consult Green. Beer photo expert  
about the room Powrie speaks of  
Green will probably understand  
exactly what he wants.

I think the best place would be  
the Galvanometer Room - one or 2 of  
the truck tables could be removed  
flush with the floor or a partition  
made. Greene would be the best  
man to superintend it its the cleanest  
place, less jar & quiet -

I cannot recall any better place  
~~anywhere~~ I will send you the  
Patent Apple on a diamond  
point soon as find best way to  
make. I dont suppose that would be a  
good but some other man might apply  
& give us trouble. — E. C. Carr

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

**ROBERT C. CLOWRY, President and General Manager.**

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

Feb. 7, 1910.

Thomas A. Edison,  
Fort Myers, Fla.

Will cable Powrie to come, conditional that option to buy shall be given if they satisfy us; that was understood, but will make certain.

DYER.

(Chg. Mfg.)

**READ THE NOTICE AND AGREEMENT ON BACK.**

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

**ROBERT C. CLOWRY, President and General Manager.**

Receiver's No.	Time Filed	Check
----------------	------------	-------

**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

Feb. 7, 1910.

Donarper,

Paris.

Tell Powrie come conditional we have option to buy if they satisfy us. <sup>later</sup> Acting on my own responsibility and hope Powrie sure success.

Dyer.

(Chg. Mfg.)

**READ THE NOTICE AND AGREEMENT ON BACK.**

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**  
INCORPORATED  
**23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
----------------	------------	-------

**SEND** the following message subject to the terms  
on back hereof, which are hereby agreed to.

Feb. 8, 1910.

Flouar (John H. Powrie)  
C/o Amoxco, Paris.

Edison telegraphs from Florida will agree to demonstration  
understanding we have option to buy on proposed terms if tests  
satisfactory. Do you want payment on account for expenses?  
Have urged Edison very strongly and hope you feel certain of  
success.

DYER.

(Chg. Mfg.)

**READ THE NOTICE AND AGREEMENT ON BACK.**



THOMAS A. EDISON,  
PRESIDENT.

FRANK LLOYD,  
VICE-PRESIDENT & GENERAL COUNSEL.

C. H. WILSON,  
GENERAL MANAGER.

A. WESTEE,  
SECRETARY & TREASURER.



TRADE MARK  
Thomas A. Edison.

## EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N. J.

### EDISON PROJECTING KINETOSCOPES AND FILMS.

10 FIFTH AVENUE, NEW YORK.  
304 WARREN AVENUE, CHICAGO.

CABLE ADDRESS  
"KURILIAN, NEW YORK."

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

ADDRESS YOUR REPLY TO

DICTATED TO THE EDISON BUSINESS PHONOGRAPH.

*Orange, N. J.* Feb. 8, 1910.

Mr. Thomas A. Edison,  
Fort Myers, Florida.

Dear Mr. Edison:

Your telegram of yesterday was received.

Yours:

"Am willing to risk five thousand on Warner Powrie.  
Do they give option to buy if they satisfy us?"

I immediately telegraphed *to him* as follows:

"Will cable Powrie to come, conditional that option  
to buy shall be given if they satisfy us; that was understood,  
but will make certain."

The following was then immediately sent to Mr. Powrie  
in Paris:

"Edison telegraphs from Florida will agree to demonstra-  
tion, understanding we have option to buy on proposed terms if  
tests satisfactory. Do you want payment on account for expenses?  
Have urged Edison very strongly and hope you feel certain of suc-  
cess."

After writing you regarding this matter and on February  
4th I received a cable from a friend of mine in Paris, a lawyer,  
who is acting as counsel for Mr. Powrie, saying:

"Eastman here soliciting proposition Powrie. Do you  
wish Powrie sell immediately Orange demonstration? Asks only  
five thousand dollars, without further obligation on your part."

After receiving your cablegram I cabled him:

*Duplex =  
When he arrives, we should have  
a good strong option contract  
so that after we have demon-  
strated, we can crawl out of it  
without any further trouble  
Powrie is a devil, but usually  
he is a good fellow of Eastman*

Thomas A. Edison.

(2)

2/8/10.

"Tell Powrie come, conditional we have option to buy if they satisfy us. Acting largely on my own responsibility and hope Powrie sure success."

I have already served notice on Mr. Brasseur that we will not continue the contract with him after March 10th, and if he does not elect to stay at his experimental place and buy the apparatus from us and assume the rent, that would be a good place for Mr. Powrie to carry on his experiments, since it is fitted up with all facilities for doing this work. Of course it is possible that in view of Mr. Eastman being in Paris there may be some hitch, but I will keep you fully informed of the situation.

Yours very truly,

*Frank L. Sperry*

FLD/IWW

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**23,000 OFFICES IN AMERICA. INCORPORATED CABLE SERVICE TO ALL THE WORLD.**

**ROBERT C. CLOWRY, President and General Manager.**

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to,

Feb. 9, 1910.

Flower, (John H. Bowrie)  
C/o Amico, Paris

Is it necessary to advance entire expenses now? We, of course will be responsible for five thousand, but think at present we should advance only travelling expenses and cost of dismounting Paris apparatus. I want amount to cover demonstrating expense, here if possible. Answer.

(Chg. Mfr.) Dyer.

**READ THE NOTICE AND AGREEMENT ON BACK.**

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**23,000 OFFICES IN AMERICA. INCORPORATED CABLE SERVICE TO ALL THE WORLD.**

**ROBERT C. CLOWRY, President and General Manager.**

Receiver's No.	Time Filed	Check
----------------	------------	-------

**SEND** the following message subject to the terms on back hereof, which are hereby agreed to,

Paris, Feb. 9, 1910.

Frank L. Dyer,  
Montclair, N. J.

Bowrie accepts terms your cable. Preparing sail before end of month upon receipt of your remittance.

Donapper.

**READ THE NOTICE AND AGREEMENT ON BACK.**

POSTAL TELEGRAPH



COMMERCIAL CABLES

**CABLEGRAM**

Date *Feb 10*  
 Telephonated *Mr. J. J. ...*

The Postal Telegraph Cable Company (Incorporated in the United States of America)  
 Registered Office: 218 Madison Street, New York, N. Y.  
 Telegrams: 218 Madison Street, New York, N. Y.  
 Cables: 218 Madison Street, New York, N. Y.

From *Paris* *Feb 10*  
 To *Zymote*

Received at *Orange, N. J.*

*Orange, N. J.*

*You may depend upon success*

*Paulie*

No Inquiry respecting the value and utility of the production of this paper. Repetitions of doubtful words should be obtained through the Company's offices, and not by DIRECT application to the sender.

Form No. 5.

WESTERN  
UNION*Cable Message*WESTERN  
UNION

THE WESTERN UNION TELEGRAPH COMPANY.

ROBERT C. CLOWRY, President and General Manager.

THE LARGEST TELEGRAPH AND CABLE SYSTEM IN EXISTENCE. CABLE SERVICE TO ALL THE WORLD.

84,000 OFFICES AND 85,000 ADDITIONAL TELEGRAPH AND TELEPHONE CONNECTIONS IN NORTH AMERICA.

DIRECT AMERICAN CABLES NEW YORK TO GREAT BRITAIN.

CONNECTS ALSO WITH ANGLO-AMERICAN AND DIRECT U. S. ATLANTIC CABLES.

DIRECT COMMUNICATION WITH GERMANY AND FRANCE, GUA, WEST INDIES, MEXICO AND CENTRAL AND SOUTH AMERICA.

WITH PACIFIC CABLES TO ALASKA, HONOLULU, AUSTRALIA, GUAM, THE PHILIPPINES, JAPAN, ETC.

Branch Offices in Principal Cities of Great Britain and the European Continent. All Foreign Telegraph Stations accept Messages to be sent

"WESTERN UNION."

TO BY FROM

RECEIVED at

308 W. 11th St. Chicago, Ill. Telephone 90.

1900  
TO  
TIME

*Paris*  
*to*  
*leaving involves heavy*  
*expenses - laboratory*  
*apparatus England Germany*  
*Paris must ask five*  
*thousand advanced expenses*  
*demonstration Orange*  
*not exceed three hundred*  
*dollar additional pourre*

[CA. FEBRUARY 11, 1910]

30, RUE DE MIROMESNIL  
1870 ANCIEN  
TELEPHONE NO 555 80

Mr. Frank L. Dyer.  
Orange New Jersey.

My dear Mr. Dyer. — Your letter of Sat inst. at hand, and you have probably received my reply to Mr. Green's report.

Upon receipt of your cable to Mr. Harper which he showed us, we wrote him an acknowledgement accepting the conditions to go to Orange.

Through delay in transmission your cable to us was received later on, readings — "Edison telegraphs from Florida, will agree to demonstration, understanding, we have option to buy on proposed terms, if tests satisfactory. Do you want payment on account for expenses.

Have urged Edison very strongly and hope you feel certain of success. Dyer. — We showed this cable to Mr. Harper and we informed him, as our expenses here

were considerable we would be obliged to ask that the full \$5000 be advanced as our expenses, for the year nearly ended here are heavy.

As Mr. Harper said he had already wired you, and thought it answered your cable, we simply wired you on the 9th, :-

"You may depend upon success,  
Paris "

Upon receipt of your cable the following day, reading: -

"Is it necessary to advance entire expenses now, we of course will be responsible for five thousand, but think at present we should advance only traveling expenses, and cost of dismantling Paris apparatus. I want amount to cover demonstrating expense here if possible  
Answer, Dear "

To this we replied as follows: -

"Leaving involves heavy expenses, laboratory apparatus, - England - Germany - Paris, - must ask five thousand advanced.

Expenses demonstration Orange not exceed three hundred dollars additional. Power."

This is in accord with our letter to you of Sept 2 1909 (Paris) and we are further obliged to insist upon this, for the reason that outside of Paris we have also a laboratory and machinery for making plates installed at Farringdon Road London, and which will also have to be dismantled and packed for shipment, should we require it later in Orange. We have besides materials and apparatus left in laboratories in Munich and Hoechst in Germany.

This will involve our going to these places, and our expenses in these different countries is in excess of \$5000 already. We should like to suggest that you



await our arrival, before you take  
up the matter of emulsion with any  
one, as we have been making a special  
study of this matter recently and are  
prepared to take care of this feature  
and the coating machinery as well.

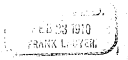
We will write you more fully  
as to requirements and preparation  
for our arrival later.

We will be prepared to leave with-  
in a week or ten days from receipt of  
the final word from you.

Yours Very Sincerely,

John H. Poirie.

Frederic McManis



Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

INCORPORATED

**24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

Feb. 14, 1910.

Thomas Graf,  
London.

Go immediately Paris, see John Bourke, Hotel Chillon, Place Concordo. Arranged for cotton color photography. He made demonstration Chicago, we guarantee expenses five thousand dollars. First order advanced. Cannot understand why necessary so long as we guarantee amount. See him, ascertain reasons. Advice no situation. If you advance money, obtain receipt on account of option given in his letter to me September second.

Dyer.

(Sent through For. Dept)

READ THE NOTICE AND AGREEMENT ON BACK.

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

INCORPORATED

**23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

Feb. 14, 1910.

Dwyer, (I am H. Bourke)  
G/o America, Paris.

Have wired London agent, Thomas Graf, see you tomorrow details.

Dyer.

(Sent through For. Dept)

READ THE NOTICE AND AGREEMENT ON BACK.

CABLE ADDRESS: "ZYMOTIC, NEW YORK."  
ALPHABETIC COMMERCIAL, LIBERTY, HURTING AND WESTERN UNION CODES USED.

TELEPHONE,  
1352 STUYVESANT.

FOREIGN DEPARTMENT  
OF THE

TRADE MARK  
*Thomas A. Edison*

NATIONAL PHONOGRAPH CO.  
EDISON MANUFACTURING CO.  
BATES MANUFACTURING CO.

10 FIFTH AVENUE.  
NEW YORK, N.Y.

FACTORIES:  
ORANGE, N.J. U.S.A.

EDISON PHONOGRAPHS  
AND RECORDS.  
EDISON PROJECTING KINETOSCOPES  
AND OPTUMAS FILMS.  
EDISON PRIMARY BATTERIES  
AND FAN MOTOR OUTFITS.  
BATES NUMBERING MACHINES.

LONDON, PARIS, BERLIN,  
BRUSSELS, SYDNEY,  
MEXICO CITY,  
BUENOS AIRES.

*New York, U.S.A.* February 15, 1910.

1054  
Mr. Paul L. Dear, President,  
National Phonograph Co.,  
Orange, N. J.

Dear Sir:

In accordance with your instructions yesterday, we cabled Mr. Graf at London  
as follows:

GO IMMEDIATELY PARIS. SEE JOHN POWRIE, HOTEL CRILLON, PLACE CONCORDE.  
ARRANGED FOR OPTION COLOR PHOTOGRAPHY, HE HAVE DEMONSTRATION ORANGE. WE  
GUARANTEE EXPENSES, \$6000.00. WANT entire expenses advanced, cannot under-  
stand WHY NECESSARY SO LONG AS WE GUARANTEE AMOUNT. SEE HIM, ASCERTAIN  
REASON, ADVISE US SITUATION. IF YOU ADVANCE MONEY, OBTAIN RECEIPT ON ACCOUNT  
OPTION GIVEN IN HIS LETTER TO ME SEPTEMBER END.

We are confirming this cable to Mr. Graf.

Yours very truly,

*John Ruchel*  
Asst. Manager, Foreign Department.

CABLE ADDRESS: "ZYMOTIC, NEW YORK."  
ALAB, C, COMMERCIAL, USERS, HUNTING AND WESTERN UNION CODES USED.

TELEPHONE,  
1352 STUYVESANT.

FOREIGN DEPARTMENT  
OF THE

TRADE MARK  
*Thomas A. Edison*

NATIONAL PHONOGRAPH CO.  
EDISON MANUFACTURING CO.  
BATES MANUFACTURING CO.

10 FIFTH AVENUE.

NEW YORK, N.Y.

FACTORIES:  
ORANGE, N.J., U.S.A.

EDISON PHONOGRAPHS  
AND RECORDS.  
EDISON PROJECTING KINETOSCOPES  
AND ORIGINAL FILMS.  
EDISON PRIMARY BATTERIES  
AND FAN MOTOR OUTFITS.  
BATES NUMBERING MACHINES.

LONDON, PARIS, BERLIN,  
BRUSSELS, SYDNEY,  
MEXICO CITY,  
BUENOS AIRES.

*New York, U.S.A.* February 15, 1910.

Mr. Frank L. Dyer, President,  
National Phonograph Co.,  
Orange, N. J.

Dear Sir:

In accordance with instructions received from you, we cabled "Flower,  
c/o Amexco, Paris" yesterday as follows:

HAVE WIRED LONDON AGENT THOMAS GRAY SEE YOU ARRANGE DETAILS

Yours very truly,

*Alfred H. Beck*  
Manager, Foreign Department.

8

1059

EDISON MANUFACTURING COMPANY

Feb. 15, 1910.

Mr. Thomas A. Edison,  
Fort Myers, Florida.

Dear Mr. Edison:

Your memorandum of the 7th inst., in reference to Warner-Bowrie, has been received, but as yet I cannot say definitely that they will come. I requested Mr. Graf to go to Paris to make the necessary arrangements and to keep in touch with me. As soon as I hear positively that they are coming I will arrange for Mr. Greene to fix up the Galvanometer room for them, as you suggest. The place that Mr. Brasseur now has would perhaps be better than the Galvanometer room, because it is all equipped for experiments on color photography, but the trouble is that the lease expires in April, and I do not think we should go to the expense of extending it for another year.

Yours very truly,

FLD/IWW

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to.

Feb. 18, 1910.

Flouar. (John H. Povrie)

C/o Amozoo, Paris.

Graf's cable address Randomly, London. Wired him fourteenth. Got in touch with him direct. All American film now Cellulose acetate. Will this affect you?

Dyer.

(Chg. Mfg.)

READ THE NOTICE AND AGREEMENT ON BACK.

Form No. 3.

WESTERN  
UNION*Cable Message*WESTERN  
UNION**THE WESTERN UNION TELEGRAPH COMPANY.**ROBERT C. CLOWRY, President and General Manager.  
THE LARGEST TELEGRAPH AND CABLE SYSTEM IN EXISTENCE. CABLE SERVICE TO ALL THE WORLD.

84,000 OFFICES AND 85,000 ADDITIONAL TELEGRAPH AND TELEPHONE CONNECTIONS IN NORTH AMERICA.

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DIRECT COMMUNICATION WITH GERMANY AND FRANCE, GIBRA, WEST INDIES, MEXICO AND CENTRAL AND SOUTH AMERICA.

WITH PACIFIC CABLES TO ALASKA, HONOLULU, AUSTRALIA, GUAM, THE PHILIPPINES, JAPAN, ETC.

Branch Offices in Principal Cities of Great Britain and the European Continent. All Foreign Telegraph Stations accept Messages to be sent  
via **WESTERN UNION.**

NUMBER	SENT BY	RECD BY	No. OF WORDS	FROM
36	8	R	7	Paris

RECEIVED at 222 Main St., Newark, N. J. Telephone 89

Feb. 19, 1906

*Zymotic**Orange (N.Y.)**Cellulose works equally well.**Paris*

Adresse Télégr: ECI PHON - PARIS  
CODE LIEDER

URINES A:  
PARIS, BERLIN  
ORANGE, U.S.A.  
BRUXELLES

MARQUE  
*Thomas A Edison*  
DÉPOSÉE  
*Compagnie Française du Phonographe*  
**EDISON**

SOCIÉTÉ ANONYME AU CAPITAL DE 100.000 FRANCS

Entree des Marchandises

3, RUE DES MESSAGERIES

TÉLÉPHONE 277-89

PHONOGRAPHER  
RECORDS MOULÉS  
PILICULES AUTHENTIQUES  
KINÉTHOSCOPES PROJECTEURS

1509

42, Rue de Paradis, 42

Paris, le... February 21st 1910... 19...  
Frank L. Dyer, Esq.,  
President  
National Phonograph Co.  
Orange (N.J.) U.S.A.

DICTÉ AU PHONOGRAPHE  
Commercial Edison  
Tg/RH

*Notes*

Dear Sir,

I have received your telegram re Mr. John Powrie, but I regret I was not able to leave London at once and left on Saturday.

I have seen Mr. Powrie this morning at Mr. Harper's office and I understand that there are a number of people who are after him as they are interested in his process. Mr. Eastman is in Europe now and he had an interview with Miss Warner and they are anxious to come to some settlement in the near future. Miss Warner has stated that to choose between offers of two firms like ours and Eastman's is difficult, but they incline towards you for personal reasons. I understand that as regards Eastman, Mr. Harper has already cabled you that he is after Mr. Powrie and I understand that Mr. Eastman's experts (he himself is in Algiers on a holiday) are in Paris and Mr. Powrie and Miss Warner want to get away as soon as possible in order to avoid giving a decision of any kind to Mr. Eastman at the present time.

In my opinion the amount of \$5000 is not needed for their tour to America although no doubt they will have some considerable



*Compagnie Française de Phonographe Edison*

F - -2-

F. L. Dyer, Esq.,

expenses before they leave. This \$5000 will to a great extent pay them for part of the expenses which they have had here for the last two years. What seems deciding to me is the fact that ~~in~~ their letter to you dated September 2nd, setting forth the conditions of a demonstration and of an option for license, expressly stipulates that the \$5000 are not to be guaranteed only, but are to be advanced, and Mr. Powrie in addition to mentioning the bills he has to pay before ~~leaving~~ and breaking up his establishment and leaving for America, insists on the terms of the letter of September 2nd which in my own opinion clearly entitles him to the advance of the full amount, viz. \$5000. You also state in your cable that in making the payment, I should get a receipt showing that this payment is made on account of option given in his letter to you of September 2nd, but Mr. Powrie asks that this \$5000 has nothing to do with the option itself, that is with the purchase price, it is in addition to the purchase price stipulated for. If however I have misunderstood your telegram and that you wish it to be interpreted only to the extent that this payment of \$5000 is made in connection with the option of Mr. Powrie's letter of September 2nd in order to have that connection established by the receipt without mentioning that this amount should be applied against the purchase price later on, I will arrange to have this put in the receipt so that there can be no doubt whatever that the amount has been paid over. I was prepared to pay Mr. Powrie \$1000 to \$2000 but do not feel inclined to take upon me the responsibility of paying the full amount and I therefore cabled you to-day as follows:

*Compagnie Française du Phonographe Edison*

F -3-

F. L. Dyer, Esq.,

"Dyer. Powrie Apozzano cremacion advance firstly because many bills expenses Balanzario breaking up. Secondly because full advance was expressly stipulated letter Bochymose. Asserts advance independent of purchase price not on ansvuring same. Aprehensor Paris."

which translates:

"Dyer. Powrie insists upon 5000 dollars advance firstly because many bills expenses to be paid on breaking up. Secondly because full advance was expressly stipulated letter September<sup>2</sup>. Asserts advance independent of purchase price not on account of same. Instruct by telegraph Paris."

I shall await here in Paris until I get your cable instructions.

Yours very truly,

*Thomas Giff*

General Manager

CABLE ADDRESS: "ZYMOTIC, NEW YORK"  
ALAS.E.COMMERICAL.LIBERTS.HUNTING'S AND WESTERN UNION CODES USED.

TELEPHONE,  
1322 STUYVESANT.

FOREIGN DEPARTMENT  
OF THE

NATIONAL PHONOGRAPH CO.  
EDISON MANUFACTURING CO.  
BATES MANUFACTURING CO.

10 FIFTH AVENUE.  
NEW YORK, N.Y.

FACTORIES:  
ORANGE, N.J. U.S.A.

TRADE MARK  
*Thomas A. Edison*  
Ref. #19025

EDISON PHONOGRAPHS  
AND RECORDS  
EDISON PROJECTING KINETOSCOPES  
AND ORIGINAL FILMS  
EDISON PRIMARY BATTERIES  
AND FAN MOTION OUTFITS.  
BATES NUMBERING MACHINES.

LONDON, PARIS, BERLIN,  
BRUSSELS, SYDNEY,  
MEXICO CITY,  
BUENOS AIRES.

*New York, U.S.A.* February 23, 1910.

Mr. Frank L. Dyer, President,  
National Phonograph Co.,  
Orange, N. J.

Dear Sir:

Enclosed we hand you cable of the 21st inst. received from Mr. Graf at Paris,  
reading as follows:

DYER POWERHE APPROZANO ORAMACION ADVANCE FIRSTLY BECAUSE MANY BILLS EXPENSES  
BALANZARIO BREAKING UP, SECONDLY BECAUSE FULL ADVANCE WAS EXPRESSLY STIPULATED.  
LETTER ECHYMOSE ASSERTS ADVANCE INDEPENDENT OF PURCHASE PRICE NO ADVANCING  
SAND APPREHENSOR PARIS

which we translate to read:

POWERHE INIST UPON \$5000 ADVANCE, FIRSTLY BECAUSE MANY BILLS EXPENSES TO BE  
PAID ON BREAKING UP, SECONDLY BECAUSE FULL ADVANCE WAS EXPRESSLY STIPULATED.  
LETTER SEPTEMBER 2ND ASSERTS ADVANCE INDEPENDENT OF PURCHASE PRICE NO ADVANCING  
ON ACCOUNT SALE. INSTRUCT BY TELEGRAPH, PARIS

We are acknowledging receipt of this cable to Mr. Graf.

Yours very truly,

*Alfred P. Richard*  
Manager, Foreign Department.

CABLE ADDRESS: "ZYMOTIC, NEW YORK"  
A.L.A.B.C., COMMERCIAL, LIEBENS, HUNTING'S AND WESTERN UNION CODES USED.

TELEPHONE,  
1388 STUYVESANT.

TRADE MARK  
*Thomas A. Edison*

FOREIGN DEPARTMENT  
OF THE  
**NATIONAL PHONOGRAPH CO.  
EDISON MANUFACTURING CO.  
BATES MANUFACTURING CO.**

10 FIFTH AVENUE.

NEW YORK, N.Y.

FACTORIES:  
ORANGE, N.J., U.S.A.

EDISON PHONOGRAPHS  
AND RECORDS  
EDISON PROJECTING KINETOSCOPES  
AND ORIGINAL FILMS.  
EDISON PRIMARY BATTERIES  
AND TALK MOTOR OUTFITS.  
BATES NUMBERING MACHINES.

LONDON, PARIS, BERLIN,  
BRUSSELS, SYDNEY,  
MEXICO CITY,  
BUENOS AIRES.

*New York, U.S.A.* February 23, 1910.

Mr. Frank L. Dyer, President,

National Phonograph Co.,

Orange, N. J.

Dear Sir:

In accordance with your telephone instructions, we are  
cabling Mr. Graf at Paris this afternoon as follows:

1059  
PAY POWELL \$5000 ON ACCOUNT OF OPTION SEPTEMBER 2ND

We are confirming this cable to Mr. Graf.

Yours very truly,

*Asa F. Rich*  
Manager, Foreign Department.

8

Adresse Télégr: EDIPYON-PARIS  
CODE LIGATA

USINES À:  
PARIS, BERLIN  
ORANGE, U.S.A.  
BRUXELLES

MARQUE  
Thomas A Edison  
DÉPOSÉE  
Compagnie Française du Phonographe  
EDISON

TÉLÉPHONE 277-80

PHONOGRAPHES  
RECORDS MOULÉS  
PILICULES AUTHENTIQUES  
KINÉOSCOPES PROJECTEURS

Entrée des Marchandises

3, RUE DES MESSAGERIES

SOCIÉTÉ ANONYME AU CAPITAL DE 100.000 FRANCS

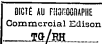
42, Rue de Paradis, 42

Registered

Paris, le February 24th 1910 19

Frank L. Dyer, Esq.,  
President

National Phonograph Co.  
Orange (N.J.) U.S.A.



*Muster*

Dear Mr. Dyer,

I have received this morning your telegram reading as follows:

"Graf Pay Powrie Cremacion on account of option Bochymose".

which translates:

"Graf Pay Powrie \$5000 on account of option September 2nd."

and I have made an appointment with Mr. Powrie and Miss Warner and have paid them \$5000 in accordance with your cablegram.

In transferring the amount into francs, I have taken the amount at the rate of 5 fr 10 to the dollar, the actual rate probably being Fr. 5.12, and should Mr. Powrie claim the difference from you he is entitled to it. \$5000 at the rate of Fr. 5.10 to the dollar amounts to Fr. 25,500, for which I herewith enclose official receipt signed by both Mr. Powrie and Miss Warner.

They intend to sail on March 5th, but owing to a few days' delay it is not impossible, but doubtful whether they can get ready on the 5th. If they cannot, they will sail on March 8th per ss "Kron-prinzessin Cecilie".

I also enclose R.M. bill charging the amount advanced to Powrie-

*Compagnie Française du Phonographe Edison*

F -2-

F. L. Dyer, Esq.,

Warner to the Edison Manufacturing Co., Orange.

Yours very truly,

*Thomas A. Edison*

General Manager

(2 enclosures)

TÉL. 210-08

*Attaché de la Légation  
des Etats Unis*

DONALD HARPER

*Counsellor-at-Law  
Paris, 32, Avenue de l'Opéra*

*Little Address  
Demoguer Paris  
Demoguer New York  
W. M. Gode*

*Paris* March 1, 1910.

Frank Dyer, Esq.,

Montclair, N. J.,

My dear Mr. Dyer,

I see that you are taking a "flyer" in regard to the Powrie matter. If you lose, you lose it, but, if it turns out as you wish, I guess it is worth the risk.

Mr. Graf was in the other day, also Mr. Powrie, and now that Mr. Powrie and Miss Warner have got the five thousand dollars (\$5,000.) agreed upon, in advance, they are busy packing up all their property at the laboratory and at the hotel preparatory to leaving. I understand that they are going from here to Germany, where, they tell me, the emulsion is to be delivered to them on Friday the 4th inst., and they expect to sail for America in the course of two or three weeks, just as soon as they can.

I sincerely hope that Powrie's demonstration will be prompt and in every way satisfactory. As far as I can judge, he appears to be absolutely sure of good results and considers the thing accomplished - time alone will tell.

I might add that Mr. Benjamin H. Conner, of my office, is going to New York next month and will be there about the time Mr. Powrie expects to arrive. As Mr. Conner has seen a good deal of

F. D.

2.

1/3/10.

Mr. Powrie, I would suggest your calling in Mr. Conner, if, at any time, there is any hitch. I say this because Mr. Powrie thinks a great deal of Conner and Conner also enjoys my perfect confidence, and I think he might be very useful in concluding the final arrangements.

Pray present my kindest remembrances to Mrs. Dyer and the boys and hoping to see you on the links at La Boulie very soon,

Believe me,

DE/HS

Cordially yours,

*Edward Taylor*





München, den March 6 1910  
 Mr. Frank L. Dyer.

Orange New Jersey.

My dear Mr. Dyer.

Since my last letter to you, we have had a visit from your London Agent Thomas Graft who paid us in your a/c the sum of £5500, less in lieu of the £5000.00 and for which we have given him a receipt.

We immediately made preparations for our departure

and have packed and shipped some of our material to New York

We left Paris the day before yesterday and came on to Munich

We have some material here and as soon as possible we will go on to Frankfurt, or Kassel.

Our visit to these two places has a further interest in that we hope to be able to secure valuable information and material which is essential for our immediate use subsequent to if not directly of value in the demonstration and negotiations pending with you.

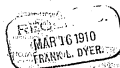
From Frankfurt we go on to London to have our machinery in the London laboratory packed for shipment and hope to be able to sail on the Aquitaine on the 10th inst.

14th of this month on at the  
latest in the Adriatic on the  
23rd

In response to the last cable  
from you I wired you that  
settling of cellulose worked equally  
well for our screen with the  
celluloid.

I have been so busy I have  
not had time to prepare the  
matter for you I had intended  
to have sent you, but  
hope to mail it in a few  
days, but I am afraid little  
preparation is possible before  
our arrival.

We shall not delay our  
departure unnecessarily and  
hope to see you soon. I  
will drop you a line again in  
a day or two. With kindest  
regards from us all, *Very truly,*  
*John D. Dore,*



REFER TO THIS NUMBER  
IN YOUR REPLY

1313

# MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

1059  
Mr. Westoe:

3/8/10.

I hand you herewith papers showing the payment by the French Company on February 24th of 25,500 francs to Mr. John H. Powrie and Miss Florence M. Warner. This is in accordance with Mr. Edison's instructions. These people are to come over here and will make experiments along the line of moving pictures, but the fact that they are coming is to be kept entirely confidential. Their work will be carried on at the Laboratory.

F. L. D.

FLD/IWW

Enc-

REFER TO THIS NUMBER  
IN YOUR REPLY

1312

# MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

1059  
Mr. Willard C. Groves:

3/8/10.

*Ref. to papers for them*  
I have just received word from our agent in Paris that the preliminary contract with Mr. Powrie and Miss Warner has been signed and that they will probably reach this country about the 15th of March. Please have everything in readiness for them. I suggest that you begin to clean out the Galvanometer Room so as to have it ready for them in order that we will not waste time in clearing it up after they come. Of course it will not be necessary to make any arrangements regarding partitions, because I agree with you that we ought to allow this to be decided by them.

F. L. D.

REFER TO THIS NUMBER  
IN YOUR REPLY

1321

1059 MEMORANDUM

FRANK L. DYER,  
CHANCE, N. &

Mr. Bachman

3/9/10.

We are expecting a couple of people here about the 16th of this month to experiment on moving pictures, and Mr. Edison has suggested the Galvanometer Room as a good place for them to use. Will you therefore please have the back end of the Galvanometer Room cleaned out so that they can occupy that part of the building as soon as they arrive and proceed with their experiments promptly. You might see Mr. Groome about this because he will have an idea of what room they will need.

F. L. D.

1059

EDISON MANUFACTURING COMPANY

March 14, 1910.

Donald Harper, Esq.,  
52 Avenue de l'Opera,  
Paris, France.

Dear Mr. Harper:

Yours of the 1st inst. has been received, and I will expect Mr. Cowrie and Miss Warner to turn up in a few days. I note that Mr. Connor is to be in New York about this time and if any hitch occurs I will be very glad to call on him.

Give my best compliments to Mrs. Harper and your children, and believe me,

Yours very truly,

FED/IWW

Vice-President.

Stech 18/1910  
 POSTKARTE - CARTE-POSTALE  
 Weltpostverein - Union Postale Universelle

My dear Mr. Dyer.  
 Have just been to  
 the Club given Warden  
 here in Iowa arrived  
 from Munich this  
 morning and on to  
 Frankfurt and  
 London. Hope to  
 see you soon.  
 Love,  
 Prairie.

1059



Frank L. Dyer Esq.

Orange  
 New Jersey  
 Wm. L. Dyer

EDISON MANUFACTURING COMPANY

1059

March 28, 1910.

Mr. Louis Reichert,  
National Phonograph Co.,  
10 Fifth Ave., New York.

Dear Sir:

This will introduce Mr. John H. Powrie, who is making some experiments for us at Orange and who wishes to have some assistance in reference to getting some goods through the Custom House. Be all you can to help him out, because it is very important that the goods should come through quickly.

Yours very truly,

FEB/IWW

Vice-President.

EDISON MANUFACTURING COMPANY

1059

April 5, 1910.

Mr. Thomas A. Edison,  
Fort Myers, Florida.

Dear Mr. Edison:

Your memorandum has been received asking "What was final result of Powrie deal?" Mr. Powrie came on about a week ago and I have had a number of talks with him. The Galvanometer Room is now being partitioned off at the back for his use. When he first came he spoke very optimistically and said he had every reason to believe that by the time you got back he would have some pretty definite results to show you, but I imagine now that he does not feel so sure of this because the work of getting ready for him is slow. At any rate, by the time you got back he will certainly be making good progress.

Yours very truly,

FLD/IWW



[ATTACHMENT]

Dyer -

What was final  
result of Parrie deal





HOTEL MAJESTIC  
WEST SEVENTY-FOURTH ST.  
AT  
CENTRAL PARK, N. Y. CITY

New York.....Oct 2.....1916

1054  
Wm. L. Sweeney - changed J.

My dear Mr Sweeney -  
Mr. Quinn  
will have explained to  
you my immediate need  
for \$3000.00 - I had not  
provided for so long a  
delay in my - (Red Cross),  
in order to cover certain  
matters I would be  
obliged to make considerable  
of a sacrifice and also  
to disclose the fact of  
our negotiations here  
which we do not desire



HOTEL MAJESTIC  
WEST SEVENTY-FOURTH ST.  
AT  
CENTRAL PARK, N. Y. CITY

New York.....2.....1916

proper just at this  
point. Money will be  
more plentiful with me  
after Jan. 1st. -

In view of the fact  
that our negotiations are  
about to be consummated,  
I thought I might ask  
you to accept my note  
and so relieve me of added  
expense and loss should  
I be forced to go West for  
this purpose.

Thanking you in advance

Very Sincerely  
Thomas M. Hansen

1059

THIS AGREEMENT made the       day of January, 1911,  
by and between THE UNIPLATE COMPANY, a corporation organized and existing under the laws of the State of New York, party of the first part, hereinafter called the Lessor, JOHN HUTCHINSON POWRIE of the City, County and State of New York, party of the second part, hereinafter called the Inventor, and THE EDISON MANUFACTURING COMPANY, a corporation organized and existing under the laws of the State of New Jersey, party of the third part, hereinafter called the Lessee, WITNESSETH:-

WHEREAS, the Lessor is the owner by purchase of certain new and improved processes for use in color cinematography and color photography, as evidenced by assignment to it of the following patents issued to John Hutchinson Powrie, the party of the second part, for the production of Helichromic screens (commonly known in the arts as a reseau, and hereinafter in this contract referred to by such name) suitable for use in the manufacture of color images, either negatives or positives, and for color photographs and in trichromy, to wit:

1. United States of America: Letters patent duly allowed and granted on the 24th day of October, 1905, and for which letters patent have been issued thereon known as Letters Patent of the United States of America, number 802,471.

2. Great Britain: Letters Patent duly allowed and granted on the 10th day of May, 1906, and for which patents have been issued thereon known as Letters patent of Great Britain Number 20,662 of 1906.

3. France: Letters Patent duly allowed and granted respectively on the 29th day of December, 1906, and on the 29th day of December, 1905, and for which patents have been respectively issued thereon respectively as Letters patent of France numbers, 358,746 as issued, and 358,747 as issued.

4. Belgium: Letters Patent duly allowed and granted on the 16th day of November, 1905, and for which patents have been issued thereon known as Letters Patent of Belgium, numbered 187,634.

5. Italy: Letters Patent duly allowed and granted on the 22nd day of May, 1906, and for which patents

have been issued thereon known as Letters Patent of Italy numbered 225,192 as issued.

6. Austria. Letters Patent duly allowed and granted respectively on the 1st day of March, 1907, and on the first day of March, 1907, and for which Patents have been respectively issued thereon, respectively as Letters Patent of Austria numbers 29,577, as issued, and 29,578, as issued.

7. Japan. Letters Patent duly allowed and granted respectively on the 13th day of February, 1906, and on the 13th day of February, 1906, and for which Patents have been respectively issued thereon respectively as Letters patent of Japan numbers 10,047 as issued and 10,048 as issued.

8. Canada. Letters Patent duly allowed and granted on the 13th day of March, 1906, and for which patents have been issued thereon known as Letters Patent of the Dominion of Canada, number 97,944 as issued.

9. Russia. Letters Patent duly allowed and granted on the 20th day of September, 1907, and for which patents have been issued thereon known as Letters Patent of Russia, number 12,364, as issued.

10. Germany. Letters Patent duly allowed and granted on the 27th day of September, 1909, and for which Patents have been issued thereon as Letters patent of Germany, number 215,072, as issued.

And

WHEREAS, the said Lessor is the purchaser and owner of certain secret processes of practical commercial value in the art of color photography, and which are referred to in general terms as follows:

1. Methods for the practical application of the patented processes of making Helichromic screens upon glass (plate reseau) to celluloid or other transparent flexible supports as used in photography in continuous lengths (film reseau).

2. Methods for the subsequent treatment of film reseau to render them of practical use in the duplication of moving picture positives in color upon reseau from color negatives upon reseau (Chromo-cinematography).

3. The production of color positives or color images for chromo-cinematography by trichromy or otherwise than upon reseau prepared film but employing negative or posi-

tive images in colors, formed through such reseaux for their reproduction (trichromo-cinematography).

4. Methods for the employment commercially of trichromatic process of printing upon paper through the medium of the reseau image by the carbon process, pinatype, three color, halftone or photochromolithography, the use of which the said Lessor proposes to grant to said Lessee:

and

WHEREAS, the said Lessee is desirous of making use of the processes of said Lessor, both secret and as covered by said Letters Patent above described, in the manufacture of the so-called moving pictures in color and in the manufacture and production of color photographs upon glass, celluloid, paper or other substance, and is desirous of making practical and available, to photographers the taking of photographs in color by the use of said processes of said Lessor; and

WHEREAS, the said Lessee is desirous of acquiring the exclusive right to employ and commercially exploit the processes above referred to, both secret and as embodied in said Letters Patent of the United States, Great Britain, France, Belgium, Italy, Austria, Japan, Canada, Russia and Germany, and Letters Patent to be issued to said Inventor in the future, or which may be hereinafter acquired by the Lessor, on improvements of the reseaux and processes and other devices in connection with chromo-cinematography and color photography; and

WHEREAS, said Lessor is willing to grant such exclusive right, as hereinafter set forth:

NOW, THEREFORE, In consideration of the premises and of the mutual promises and agreements hereinafter contained, and other good and valuable considerations, the parties hereto agree for themselves, their executors,

administrators, successors and assigns, as follows:

A R T I C L E F I R S T.

SUBJECT MATTER OF THE ASSIGNMENT.

The Lessor does hereby sell, assign, transfer and set over unto the said Lessee, its successors and assigns but subject to the express terms and conditions of this contract, the exclusive right, concession and license to employ and commercially exploit the said processes above referred to, both secret and as embodied in said Letters Patent, all and several above described, without reservation and in any part of the world. This said exclusive right, concession and grant shall include not only the manufacture of reseau for making the photographic plates, photographic films, cinematographic films and cinematographic plates in color and the making of photographs in color therefrom, but shall also include the various methods and processes above referred to for the manufacture of color negatives and color positives for trichromo-cinematography and images upon paper or other suitable media by trichromy or trichromatic methods.

A R T I C L E S E C O N D.

TITLE OF THE LESSOR.

The Lessor hereby covenants and guarantees that it has by assignment from the Inventor herein procured full right and power to grant the exclusive rights as set forth in the first article hereof, and that none of the patents hereinbefore described has been assigned to any other party or corporation whatever. The Lessee does hereby acknowledge to be valid the Letters Patent of the Lessor embodied in this agreement and also acknowledges the title to said Letters Patent hereinbefore referred to to be fully and legally vested in said Lessor.

ARTICLE THIRD.

FUTURE PATENTS AND IMPROVEMENTS TO BE ASSIGNED TO  
LESSEE.

All future patents relating to color photography or apparatus or material employed in the art of color photography, which may become the property of the Lessor, and all future patents and improvements relating to color photography or apparatus or material employed in the art of color photography, which may be obtained by the Inventor herein, shall be conveyed, assigned, transferred and set over unto the Lessee by the said Lessor or by the said Inventor herein, subject to the same conditions and terms as applied to the patents hereinbefore referred to.

ARTICLE FOURTH.

LIFE OF CONTRACT.

It is hereby agreed by and between the parties hereto that the life of this contract shall be the duration of the certain Letters Patent of the United States of America issued to the Inventor herein on the 24th day of October, 1905, numbered 802,471, now the property of the Lessor, which expire by limitation on the 24th day of October, 1922, and also during the life of any further patent or patents, additions, re-issues or extensions thereof, of the United States of America which shall hereafter become the property of the said Lessor by assignment from the said Inventor, or which shall be issued to the said Inventor, the said patents to include any improvement or addition throughout the realm of chrono-cinematography and color photography.

ARTICLE FIFTH.

CONSIDERATION.

In consideration of the sale and conveyance of the patents and secret processes hereinbefore referred to in Article First of this contract, the Lessee hereby agrees to pay to the Lessor: 1. A present cash payment; 2. Royal-

ties; 3. Minimum royalties, as hereinafter set forth.

I. The Lessee agrees to pay the Lessor at the time of the signing of this contract the sum of Two Hundred Thousand Dollars (\$200,000.00) in cash or by certified check payable to the order of the said Lessor. It is expressly agreed that such payment shall be absolute and in no event shall the same, or any part thereof, be recoverable from the said Lessor for any reason whatsoever, nor shall it be deemed or held to be a part payment for any royalties or other sum, nor shall the said Lessor nor said Inventor, or the assigns of said Lessor or Inventor, ever be compelled to account therefor for any cause whatsoever, nor shall the said payment be used as a set off or counterclaim against any claim arising out of any of the agreements or covenants hereof. It being understood that this is partial payment for the time and money spent by the Lessor and Inventor prior to the execution of this contract and preliminary thereto.

II. The Lessee covenants and agrees for itself, its successors and assigns, to pay to the Lessor, its successors and assigns, royalties to be ascertained and determined by the Metric System, it being understood that when linear meters are referred to the standard width of thirty-five (35) millimeters and one (1) meter in length is intended, as follows:

a. Referring to cinematographic or moving picture films, two (2) cents per linear meter for all color cinematographic films manufactured by said processes by said Lessee, its successors and assigns, or by the sublicensees of said Lessee, up to the first five million linear meters; one and one half (1-1/2) cents per linear meter for all cinematographic films manufactured by said processes by said Lessee, its successors and assigns,



or by the sub-licensees of said Lessee, from five million linear meters to ten million linear meters; and one (1) cent per linear meter for all color cinematographic films so manufactured by said processes by said Lessee, its successors and assigns, or by the sub-licensees of said Lessee, over and above ten million linear meters.

b. The said Lessee further covenants and agrees to pay the said Lessor the same royalties on any and all chromo-cinematographic films in which the color differentiation is due to the selective action of the reseau image, whether such positive film in color carries reseau or not as are applicable under the terms and conditions of this contract to the making of cinematographic or moving picture films in color, said royalties being set forth in clause "a" of sub-division "II" of Article "5" of this contract.

c. The Lessee covenants and agrees to pay the Lessor on all reseau plates used in the production of moving pictures in color and upon all reseau films and plates not to be utilized in connection with moving pictures a royalty of sixty (60) cents per square meter for all such reseau films or plates manufactured.

d. It is further agreed that a royalty not exceeding twenty-five (25) per cent. of the royalty hereinbefore mentioned and agreed upon for all new reseau, upon either films or plates as have been used commercially and rejuvenated or recoated for subsequent commercial use, shall be paid by the said Lessee to the Lessor.

III. a. The Lessee guarantees to said Lessor minimum cash royalties, payable by said Lessee to said Lessor quarterly in equal quarterly payments on the first days of January, April, July and October of each year as follows: the first payment to be made on April 1st, 1911:

During the first year next ensuing after the signing of this agreement by the respective parties hereto the sum of twenty thousand Dollars (\$20,000.00)

During the second year next ensuing after the signing of this agreement by the respective parties hereto the sum of thirty thousand dollars (\$30,000.00).

During the third year next ensuing after the signing of this agreement by the respective parties hereto the sum of forty thousand Dollars (\$40,000.00).

During the fourth and all ensuing years during the life of this contract the sum of Fifty Thousand Dollars (\$50,000.00) per annum.

b. The Lessee covenants and agrees that it will pay the sums to become due as royalties, in addition to the minimum guaranteed royalties hereinbefore referred to, quarterly and within thirty days after the expiration of each quarter. The minimum royalties are to be paid as above stated on the first days of January, April, July and October of each year, and if there is due an additional sum by reason of the royalties above enumerated this shall be paid quarterly and within thirty days after the expiration of each of said quarters.

#### A R T I C L E   S I X T H .

BOOKS OF ACCOUNT TO BE KEPT BY THE

LESSEE.

The said Lessee shall keep at all times hereafter during the life of this contract, and until final settlement of account between the parties hereto, a special book or special set of books, in which shall be kept an accurate and complete record of all film and plate research manufactured by the lessee, its representatives and assigns to be known as "Research Books". These books shall be two

in number and shall be known respectively as Glass and Film Reseau Books. A third book shall also be kept for recording the manufacture of color positives upon glass, film, paper or other substance not carrying reseaux.

The Lessee further covenants and agrees to keep a fourth book wherein shall be entered the amounts and prices of all materials whatsoever used by it in its factory or laboratory in the manufacture of reseaux or in any of the branches of the work to be carried on by the lessee under the secret processes and patents referred to herein.

The Lessee further covenants and agrees to keep a special book, or special set of books, in which shall be entered all revenues, income and profits of any kind and nature whatsoever received by the lessee, its representatives, successors and assigns, from the exercise of the rights granted by this contract in any manner whatsoever.

The said Lessee covenants and agrees to allow the lessor, its officers, agents, representatives, successors and assigns, access at all times to the said books for the purpose of inspection and audit.

The said Lessee further covenants and agrees to permit a certified public accountant named by the Lessor to examine each and every one of the books herein above provided for and to permit said accountant, should he desire further information from the other books of the lessee, in order to determine whether the books above named contain a record of all the work and products manufactured or produced under the secret processes and patents herewith conveyed to have access to such other books of the lessee as in his judgment he may deem necessary to examine.

ARTICLE SEVENTH.

FACTORIES AND MACHINERY.

The said Lessee hereby covenants and agrees to properly build, install and equip within two hundred days after the signing of this contract a factory fully and completely equipped to manufacture and furnish not less than four thousand ( 4,000.) linear meters of cinematographic films per day.

The said Lessee shall also properly build, install and equip a factory within two hundred (200) days after the signing of this contract, with the necessary machinery and other equipment for the manufacture of negative and positive reseau upon glass, with a capacity of twenty-five (25) square meters per day, and shall also furnish the necessary machinery and other equipment for the manufacture of emulsion suitable for use in connection with said processes above referred to and machinery for coating the same upon film and glass.

The Lessee shall also provide at its own expense all suitable and necessary machinery, celluloid, paper, films, emulsion and other materials, to supply such plates and films for the commercial market.

The said Lessee further covenants and agrees to enlarge the factories, plants and equipment as the demands of the trade shall require.

ARTICLE EIGHTH.

LESSOR'S PATENTS AND PROCESSES TO BE USED  
EXCLUSIVELY.

It is further agreed that the processes of said Lessor, both secret and as set forth in said Letters Patent all and singular hereinbefore described, and all its future patents and improvements, shall be exclusively employed by said Lessee, its successors, assigns and sub-

licensees, in the production of positives in color, whether for use in cinematography or in cinematographic apparatus, or in the manufacture of color positives on glass, film, paper or other substance, unless the Lessor's consent in writing to the use or adoption of other patents or processes is given.

ARTICLE NINTH.  
SERVICES OF JOHN HUTCHINSON POWRIE.

John Hutchinson Powrie, party of the second part, hereinbefore referred to as the Inventor, agrees to give so much of his time as may be necessary to properly install in the factory or factories of said Lessee machines and machinery sufficient to make at least four thousand (4,000) linear meters of cinematographic film and twenty-five (25) square meters of reseau plate per day. The said Powrie further agrees to give to said Lessee the benefit of all future improvements, patents and processes respectively made, patented and devised by him for use in the manufacture of color images, either negatives or positives, for color photographs in trichromy, or in the realm of color photography generally; and said John H. Powrie further covenants and agrees to apply from time to time for Letters Patent of the United States and of foreign countries for such of his discoveries and improvements in said processes as may be necessary for the protection of the Lessor and of the Lessee herein.

The said John H. Powrie, in consideration of the payment by the Lessee to him of all his necessary expenses and a salary of \_\_\_\_\_ per day, agrees to give such of his time as may be necessary (consistent with his other duties) to the installation by said Lessee of all necessary plants for the manufacture of color films and plates, or for the instruction of representatives and employees of said Lessee, in connection

with the commercial utilization of said inventions and secret processes of the said John H. Powrie in connection with color photography.

In the event of the sickness or disability of said Powrie, party of the second part, for a period of over forty (40) consecutive calendar days in any quarter during the installation of the said machinery or plants or the instruction of said employees of the Lessee, the said Lessee shall be authorized, if the said sickness or disability shall seriously inconvenience it in its manufacture of chromo-cinematographic films, and resseau plates and of resseau film not used in the manufacture of moving pictures, to retain for its own use one third of the royalties otherwise payable to said Lessor, in excess of the minimum royalties hereinbefore provided for, for the number of days in which said Powrie shall be so sick or disabled as aforesaid, but in no case shall the royalties hereinbefore called the "Minimum Royalties" be withheld on account of the sickness or disability of said Powrie, party of the second part.

If said Powrie shall die during the life of this contract as hereinbefore defined, the Lessor shall in his place and stead substitute another person, who shall have knowledge of the secret processes hereinbefore referred to, and such person shall do and perform all the acts which said Powrie by this contract undertakes to do and perform, with the same force and effect as if the same had been performed by the said Powrie, party of the second part.

In the event that upon the death of the said Powrie, party of the second part, during the life of this contract the said Lessor shall not be able to substitute in his place a person who shall have knowledge of the secret processes aforesaid, it is understood that during the

remainder of the life of this contract, the lessor shall be entitled to receive the minimum royalty hereinbefore referred to, but no further royalty in addition thereto.

A R T I C L E T E N .

RIGHT OF THE LESSEE TO TRANSFER THE USE OF THE  
PATENTS AND PROCESSES.

The Lessee shall notify the Lessor in writing of the name and address of any person or corporation to whom it may desire to transfer the right to use and utilize the processes and inventions above described, or any of them, and shall forthwith submit to the said Lessor the draft of the contract which the said Lessee proposes or desires to enter into with such person or corporation.

It is agreed between the parties hereto that any such contract between the Lessee and sub-licensee shall contain a provision by which said sub-licensee shall agree to use the processes and patents of the Lessor exclusively, and that such contract shall further provide that the books and papers of such sub-licensee shall be open to the same inspection and audit as is hereinbefore provided in respect to the books and papers of the Lessee in Article Six, such transfer or assignment of these rights to any other person or corporation shall be made subject to all the terms and conditions of this contract, and no contract for the transfer, sale or assignment of the use of the said rights transferred by this contract by any proposed sub-licensee of the Lessee shall be valid unless approved by the Lessor.

In the event that any such license shall be granted, after the approval of the Lessor, the Lessee agrees to guarantee the payment of the full amount of royalties to the Lessor for resau cinematographic films or plates or photographic plates in color, used by the sub-licensee, at the same rates provided for in this contract, and the royalties

so due and owing from the said sub-licensee if not paid to the Lessor within thirty days after the first days of January, April, July and October, shall be paid to the Lessor without deduction of any kind by the Lessee. The Lessee is not relieved by such transfer of any of its obligations under the terms of this contract, and any breach of any of the terms of this contract by any person or corporation to whom the Lessee shall transfer the rights under this contract shall be considered a breach of this agreement by the Lessee, and the license may be terminated by such breach, as hereafter provided for in Article Fifteen of this agreement.

#### A R T I C L E   E L E V E N .

##### FULL USE TO BE MADE OF PROCESSES AND PATENTS BY LESSEE AND SUB-LICENSEE.

It is hereby agreed between the parties that the Lessee will use every effort to promote the manufacture and exploitation of the processes and patents above described in chromo-cinematography and in all forms of color photography, so as to bring to the Lessor the largest possible financial return therefrom, and will not itself limit or curtail, or make any agreement with any other person or corporation to limit or curtail, the production of chromo-cinematographic or photographic reseau films and reseau plates or any of the images or products on glass, paper, or other substances used in the realm of color photography; nor will said Lessee discontinue, or agree with any person or corporation whatsoever to discontinue, any part of the manufacture of the chromo-cinematographic films or plates or photographic reseau films and reseau plates whatever, on any of the work on any of the processes or patents of the Lessor hereinbefore described and hereinbefore referred to.



ARTICLE TWELVE.

PRESERVATION OF SECRET PROCESS.

John Hutchinson Powrie, the Inventor, agrees to prepare a complete and detailed description of each and all of the secret processes devised by him heretofore referred to, as will enable any person skilled in the art to proceed to use such processes in the art of color photography, and this description shall be subscribed and sworn to by said John H. Powrie and the verification thereof shall be exhibited to an officer of the Lessee, or, at the election of the Lessee, to its board of directors at a meeting thereof, and such statement shall thereupon be placed in the presence of the board of directors, or a committee of the same, or, at its election, in the presence of an officer of the same, in a sealed wrapper, which shall thereupon be deposited in a safe deposit box in Safe Deposit Company under the following instructions, to wit: that no one shall have access thereto except in the case of the death or permanent disability of said Powrie, or unless the Lessee refuses at any time to proceed with the manufacture of color photographs under the several patents, inventions and processes hereinbefore referred to, in which latter event, an officer of the Lessor shall have access thereto.

To further insure the Lessee that said secret processes shall not be lost because of the death or permanent disability of said Powrie, it is covenanted and agreed that the Lessor will have and procure one of its officers, or a person designated by it to be fully conversant with the several secret processes hereinbefore referred to and that the name of said person shall be given to the Lessee at the time of the signing of this contract or it shall be given to the said Lessee at any time upon proper demand.

A R T I C L E T H I R T E E N .

SUITS.

It is hereby covenanted and agreed that all suits brought against any of the parties to this agreement or any sub-licensee of the lessee which shall effect in any way the secret processes and patents mentioned in this agreement or which shall hereafter be granted to the lessor or the inventor, shall be defended by the Lessor and Lessee and the expenses thereof be equally divided between the said Lessor and the said Lessee. If in any such suit the lessor be not named as a party defendant the lessee agrees that the Lessor shall be notified immediately of the pendency of such suit and the lessor given an opportunity to come in and become a party defendant to the said suit, and said lessee further covenants and agrees that it will fully and at once inform the lessor respecting every suit brought against the said lessee or any of the sub-licensees of said lessee.

In case any of the patents taken out by the Inventor, of which the lessor is the holder, shall be infringed or interfered with and it shall be deemed necessary by the Lessor and the Lessee or either of them, to bring a suit restraining such infringement or interference, the expense of such suit shall be borne equally by both the Lessor and the Lessee and it shall be prosecuted in the joint names of the Lessor and the Lessee, unless otherwise expressly agreed upon in writing at the time the suit is brought.

Each party to this agreement further covenants and agrees to notify both of the other parties, or such counsel as may be designated, of any suit affecting the rights of any party to this contract, begun by any person or persons, corporation or corporations, against any of the parties hereto, as soon as possible after the beginning thereof.

Each party hereto further agrees that it or he will

give notice of any intention on its or his part to begin a suit against any person or persons, corporation or corporations, affecting the rights of any of the parties under this contract in relation to its or his interests in any of the processes or patents hereinbefore referred to, prior to the commencement of such suit.

#### ARTICLE FOURTEEN.

##### ARBITRATION OF DISPUTES.

The parties hereto further covenant and agree to submit to arbitration all matters of difference between them or any of them relative to the interpretation, construction and operation of the terms of this contract and any other difference under this contract; and in case of a breach of this contract by any of the parties hereto and the subsequent termination of the same as provided for in Article Fifteen of this contract, it is hereby agreed that the amount of damages to the party aggrieved shall be fixed by arbitration; that in submitting any of these matters aforesaid to arbitration the Lessor shall appoint one arbitrator and the Lessee another arbitrator, and that the two arbitrators so selected shall meet and choose a third; and that a written decision of a majority of the three arbitrators so selected and chosen shall be binding upon the parties hereto. The parties hereby mutually covenant and agree each with the other that they and each of them will respectively abide by and perform the decision of the arbitrators.

In case of the failure of the Lessor or the Lessee to appoint an arbitrator, upon demand of the Lessor or the Lessee, as the case may be, the party aggrieved may treat such failure to appoint an arbitrator as a breach of this contract and apply to a court of competent jurisdiction for all damages sustained by such breach.

ARTICLE FIFTEEN.

BREACH.

In case the Lessee shall fail to comply with and fulfil any or all of the covenants, terms and conditions of this license, then, and in such event the Lessor may terminate the same, provided that whenever the Lessor shall terminate the same, the method of the termination shall be as follows, to wit:

The Lessor shall cause a written notice to be served upon the Lessee, which notice shall state specifically the cause for terminating and rendering null and void this license and shall declare the intention of the Lessor to terminate.

Such notice may be served upon the Lessee by delivery to an officer of said Lessee wherever he may be found in the United States, and in case an officer of said Lessee cannot be found, such notice may be served by delivery thereof to any agent or person authorized to transact business for the Lessee, or by sending such notice by registered letter to said Lessee at Orange, Essex County, New Jersey. Thereupon the Lessee shall have ten days after the service of such notice as aforesaid, in which to remedy or remove the cause of causes mentioned in said notice of terminating and rendering null and void this license, and if within such period of ten days the said Lessee does so remedy and remove such cause or causes then such notice shall be withdrawn and this agreement continued in full force and effect. And in case said Lessee does not so remedy or remove said cause or causes named for rendering null and void this license, within said period of days, then this license shall be and become null and void from and after the expiration of said period of ten days. And in case this license shall become null and void as

aforesaid, said Lessee shall immediately deliver to said Lessor at the place of business of said Lessee all machines and machinery in the possession or control of said Lessee or any of its sub-licensees or transferees under the provisions of this license.

The revocation or annulling of this license at the request of or because of the default of the Lessee shall not revoke, annul or otherwise affect any rights theretofore acquired by the Lessor under Article Five of this agreement or under Article Six of this agreement relative to the payment of royalties and the keeping of books respectively.

#### A R T I C L E   S I X T E E N .

#### ROYALTIES NOT TO WHOLLY CEASE ON DIVESTING OF OWNERSHIP BY AN AMERICAN COURT, ETC.

It is further agreed that if at any time hereafter by final order and decree of an American Court of last resort of competent jurisdiction, the Lessor or inventor shall be divested of its ownership of its letters patent hereinbefore mentioned or any of them, and by the same order and decree said ownership shall be invested in another person other than the Lessor or Inventor or said lessor or Inventor shall be divested of its ownership and said ownership shall not be invested in any one, then and in such case the royalties hereinbefore provided to be paid by said Lessee to said Lessor shall not wholly cease, but that the same shall be re-adjusted upon some basis which shall be fair and equitable to the parties to this agreement. In case of the failure of the parties to agree upon the basis for such re-adjustment said matter shall be referred to the arbitrators and decided by them in the manner provided for the arbitration of other disputes, as provided for in Article Fourteen of this agreement.

A R T I C L E   S E V E N T E E N .

N A M E   O F   F I L M S   A N D   P L A T E S .

The said reseau films and plates shall be known, designated and described as "Florence Films" and "Florence Plates".

A R T I C L E   E I G H T E E N .

A R R A N G E M E N T   O F   C O L O R   B A N D S .

It is further agreed that nothing in this contract shall be construed so as to prevent any of the parties hereto from varying the form, arrangement or relative proportions of the bands of color to be placed on the said Helichromic screen, it being understood that the said bands of color matter may be arranged transversely, obliquely or in any other manner, shape or form which may be deemed advisable or expedient, and the number and proportions of the various colors may be varied at the will of the parties hereto, anything in this contract or in the letters patent to the contrary notwithstanding.

A R T I C L E   N I N E T E E N .

T A X E S ,   L I C E N S E S   A N D   O T H E R   C H A R G E S .

All taxes, licenses and other charges that may become due or owing on account of any of the patents hereinbefore described are to be paid by the Lessor, except that the Lessee agrees to do everything that may be necessary to protect the patents and keep the same alive and in full force and effect in those countries whose laws require patents to be exploited within a fixed time after the issuance of said patents.

A R T I C L E   T W E N T Y .

O B L I G A T I O N S   O F   C O N T R A C T .

All the rights, interests, obligations and remedies aforesaid, either vested in or imposed upon any of the parties to this agreement, shall be deemed to belong to

and be enforceable by the executors and administrators,  
successors and assigns of any of the parties to this  
agreement.

A R T I C L E T W E N T Y - O N E .

C H A N G E S , A L T E R A T I O N S A N D A M E N D M E N T S .

The parties hereto further mutually covenant and  
agree that no change, alteration or amendment to this  
agreement shall be valid or of any effect whatsoever upon  
any of said parties, unless consented to in writing by  
each of the parties hereto, with the same formalities of  
execution as this agreement.

I N W I T N E S S W H E R E O F the parties hereto have  
hereunto set their hand and seals the day and year first  
above written.

THE UNIPLATE COMPANY

BY \_\_\_\_\_

President.

Party of the First Part.

Attest:

\_\_\_\_\_  
Secretary.

\_\_\_\_\_  
Party of the Second Part.

THE EDISON MANUFACTURING COMPANY

BY \_\_\_\_\_

Party of the Third Part.

Attest:

\_\_\_\_\_  
Secretary.

18  
New York, March 27th., 1911.

Mr. Frank L. Dyer,  
National Phonograph Co.,

Orange, N. J.

*Sub*

My dear Mr. Dyer:

I had occasion to ride in on the train to New York City with Mr. Waddell one evening some two months ago, and the matter of handling motion picture films and their development was a subject of discussion between us.

I told Mr. Waddell that I had a machine for the treatment of films in an automatic and continuous manner that was admirably adapted for their development, and this interested him considerably.

Having made application for patents on the invention I showed the apparatus to Mr. Waddell some weeks ago.

The last time I saw him at the laboratory some ten days ago he suggested that he thought the device would be an excellent thing for the development of the small films for the home machine. In fact, I believe it is the best way in which the film for the small machine can be developed, as being handled automatically it may be developed with greater certainty than the development of films by visual examination, which, of course, is quite impracticable with the small images in the home machine. I promised Mr. Waddell that I would write you regarding this



Mr. Frank L. Dyer.

device so that in case you should care to consider "trying it out" for the little film some arrangement might be made to take the matter up without delay.

As I am extremely busy on my own work I could not, of course, give very much time to the matter myself, which is one reason why I have not written you sooner, but a machine for the development of this small film could be very quickly made as the apparatus is comparatively simple and inexpensive of construction, notwithstanding the great accuracy with which it performs the work.

Mr. Call, your engineer, had an opportunity to see the apparatus a few days ago, although it was not in operation at the time, but he has a good idea of the principle involved and could easily give you some idea of what the cost of construction of such a machine might be. If you care to see the apparatus which I am using for the sensitisation of the film I shall be pleased to show it to you.

A machine could be constructed that would handle say, 1000 to 1200 ft., per hour of the small film, taking it from the reel, developing, fixing, washing and drying and finally reeling it up automatically.

I have some results on my own film which are very creditable and hope within a few days to go out again to make some further negative exposures with Mr. Green.

I am now coating my film between the perforations, as

Mr. Frank L. Dyer.

all my reseau film has been out and perforated, and I am obliged to wash it off after exposure and development and recoat it for further experiments in increasing the sensitiveness or speed of the film.

If you wish to see me or wish to come to the laboratory I wish you would send me word in advance either by telephone or through Mr. Churchill, so I can arrange to show you the apparatus.

Yours very sincerely,

*John H. Paine.*

[ATTACHMENT]

1059  
P. 1059  
APPARATUS FOR THE AUTOMATIC BATH TREATMENT  
OF PHOTOGRAPHIC FILM IN A CONTINUOUS MANNER.

As an introduction to a brief description of this apparatus a few prefatory remarks are almost essential to an intelligent appreciation of its merits.

The scientific principles involved in the optics and chemistry of photography have advanced during the past ten or fifteen years with as rapid strides as have other arts and crafts, such as electrical and mechanical engineering. The application of fundamental rules governing the mechanical operations in photographic work have done much to relieve the operator from the necessity of burdening his mind with many details which we have come to learn are simply mechanical, and not matters of intuition or artistic feeling. By being thus relieved of this care and attention in mechanical detail, chemicals and formulae he is able to more intelligently give his attention to the artistic side of the work, such as the lighting arrangement and composition of his picture.

One of the greatest obstacles to be overcome, however, has been the elimination of the personal element in photographic development. Strange as it may seem one of the greatest barriers to progress along scientific lines in this respect has been the deep-seated belief of the old experienced professional photographer that his years of training and long practice have given him that personal skill which enabled him to develop his plates and bring out a quality and character to them that could not be attained in any other way.

of long training  
practical experience.

[ATTACHMENT]

This is true only, to the extent that his long training has fitted him to do these things in a mechanical way, and <sup>he</sup> is really performing his work like an automaton. How much better a machine might do his work with mathematical precision and leave him free to give his attention to those things which are necessarily dependent upon personal skill and judgment. The first great advance made in this line was the conclusive demonstration by Messrs. Hurter & Drifffield whose researches in photographic development are perhaps better known to the amateur and technical worker than they are to the professional. There is practically little that can be done with an exposed photographic image, plate or film to alter its character in development. A negative, to begin with, is but a means to an end. It is not the termination of the finished product, for the lights and shadows which are represented in reverse in the negative have again to be reversed in the production of the positive, whether it is a print upon glass to be viewed by transmitted light or a print on paper. In an underexposed negative the scale of gradations run from the high lights to the middle tones. In an overexposed negative the scale of gradations run from the middle tones to the shadows. In a properly exposed negative the renditions of light and shade are more properly graduated between the lights and shadows. If the negative is underexposed there is nothing that can be done in development to remedy what is apparently a defect in the exposure, for the resultant print from such a negative

[ATTACHMENT]

will invariably show the scale of gradations of... an under-exposed negative. The same is quite true of a negative which has been correctly exposed or over-exposed. As a matter of fact we criticise the print made from the negative from a pictorial, if not an artistic, point of view, while as a matter of fact the under-exposed negative is as faithful a rendition of that portion of the picture representing the high lights as one which is correctly exposed. And, furthermore, the correctly exposed negative so-called, does not fully record properly the gradations of a picture in which the high lights are intense and the shadows very dark, for the reason that no photographic plate is capable of rendering properly the scale of gradations in intense light with deep shadows. It is in this respect that the long training of the professional photographer who has justly earned a reputation for good work selects such conditions of lighting as will come within the scope of the sensitive coating upon his plates. There is no better illustration of the truth of these statements with regard to the development of photographic films or plates than the development tank which is put out by the Eastman Kodak Company. The amateur who knows nothing of the technique of photographic work makes a series of exposures<sup>of</sup> from six to twelve or more upon a single band of coated celluloid which is rolled beneath a covering of black paper upon a bobbin and permitting of the exposures being made at his convenience by simply unwinding the black paper supporting the sensitive film, <sup>The</sup> exposed portions of the film being rewound upon another spool all con-

[ATTACHMENT]

tained in the rear of his camera, For development the bobbin of exposed film is placed in a box for the purpose, and the projecting end of the black paper which supports the sensitive film is now attached to an apron provided with projections along its margin so that when winding up the paper and film, a space is allowed to intervene between the exposed surface of the sensitive film and the preceding turns of the back of the apron. Briefly the film is rewound inside of the an apron which allows room for the developer to reach the sensitive surface without its being covered in any way by the back of the apron. This apron is made of opaque material and wound upon a reel which permits of its being removed from the box without exposing it to the light. This reel carrying exposures which are frequently made under diversified conditions are now lowered into a can in which the developing solution is placed, the cover put on and allowed to remain for a uniform and stated length of time regardless of the conditions under which the pictures were taken. It has been proven repeatedly beyond question that negatives developed in this way are as good, and in most cases better, than if the separate negatives had each received individual or special treatment in a bath and the time of development judged by visual examination. In the commercial manufacture of motion pictures the long strips of film some three hundred feet in length represent thousands of individual exposures. The mechanical means for making the exposures is such that there is relatively little difference, if any, in the exposures upon the film throughout its entire length. Apparatus

[ATTACHMENT]

has been devised which is capable of enabling the operator to predetermine the conditions of the light under which he is working so that he may adjust his apparatus to make correct exposures with a very small percentage of error. So there is no excuse for either under or over-exposure. With the matter of development, x if time and tank development were rigidly adhered to, there should be comparatively little variation in the results, but in the device referred to in this paper all negatives could be developed so that they should be alike in density and almost permit of positives being printed from them under standardized conditions.

This apparatus for bath treatment of film consists in drawing the film from the exposed reel by a leader over revolving rollers in a helical form, these rollers being driven by a motor and the rollers depending from a frame-work immerses the film passing around them in a bath of developer or other solution placed in a tray underneath. The trays rest upon a table with projecting pins beneath them which may be actuated by a lever that raise the tray containing the solution so that the rollers and the film are submerged in the solution. When the leader has entered this solution the sensitive film while continuously travelling over the rollers remains in the bath for a sufficient length of time to properly develop the film. This, of course, is dependant upon several things. The number of turns of the film helix, or in other words, the total length of film immersed in the solution at any moment, the speed at which the film is travelling through the solution, the concentration of the developing agent, and also the temperature of the developer. These conditions once properly deter-

[ATTACHMENT]

mined may be maintained as a constant and should invariably give uniform results. On emerging from the developing solution the film passes over other rollers and through successive baths placed side by side upon the table, such as fixing, washing and glycerine baths, and on emerging from the last bath the surplus solution is automatically removed from the surface, the back may be properly cleaned, the film travelling on over a drying rack on which it dries quickly keeping a uniform tension throughout its entire length, thus avoiding any torts or twists which would tend to produce local inequalities, which frequently occur in other methods of handling film and give rise to local variations in the number of perforations in a given length of film and in some instances even differ between the edges of the film on each side and which occasion disagreeable jumping in the projected pictures and a tearing out of the perforations.

The cost of construction of a machine for this purpose is not great and would pay for itself in a few months in the labor, material and time saved, to say nothing of the economy of space and improved quality of the film resulting from its use in the commercial development of film.

It is, of course, obvious that this apparatus can quite as readily be employed for the operation of increased sensitization of film in a bath, for the intensification of weak images or the reduction of those which are too strong. We would advocate, however, in order to reduce to a minimum any loss which might be due



[ATTACHMENT]

by reason of improper exposure the device already referred to for determining in advance the proper exposure for the negative, and also an apparatus of extremely simple construction for the determination of the exposure for the positives, by which the positive printing machine may be properly adjusted in printing from the negative, so as to give uniform exposure to the positives printed from any individual negative in order that they may be developed together. Or rather, to follow in succession through the machine without any variation. It is also important that in the development that the developer should be kept at a uniform temperature. This can easily be controlled by keeping a current of water gradually flowing through a pan in which the developing tray is partially immersed. As the developer itself gradually loses its energy in developing long lengths of film this bath should be continuously and gradually replaced by fresh developer, and in order that the developing solution shall be kept at a constant level the developer which is being exhausted by reason of its action on the film should gradually be drawn off while fresh developer is flowing in. With a series of washing baths for the elimination of the hypo from the film the same arrangement should be provided and it will be found that in this way the film may be quickly and thoroughly freed from the fixing bath. As to the drying of the film, the apparatus devised by Mr. Thomson of the Water-proof Film Co. would be very satisfactory, preventing the film from being

[ATTACHMENT]

drawn out of shape and allow of its being properly cleaned automatically before drying, and after which it should, if desired, be permitted to pass directly into an adjoining apartment to be a water-proofed.

For determining a proper exposure in printing the positives we employ a frame similar to an ordinary photographic printing frame in which is placed a plate of ground glass back of which are a series of very fine gratings, the area of which correspond to those of the image on the negative film. A series of these gratings are placed side by side so they cover individual negative images. These gratings must be graded in such a manner that they retard the light which passes through the different images on the negative film in definite proportions; for example, at the top the direct light will pass through the ground glass only and through the negative image under it. The second negative image is retarded by the grating so it receives only one-half as much light, and the third half as much as the second, the fourth half as much as the third, etcetra, and with say five or six steps like this a series of different exposures may be obtained simultaneously upon a short strip of the sensitive positive film which is intended to be used in the printing. The frame should be so made as to allow the negative film to be inserted through openings provided in the top and bottom of the frame without having to cut off pieces of the negative. The frame is now placed in a fixed position where it can be exposed to a constant source of light at a fixed distance, and the trial strip of film developed in a tank

[ATTACHMENT]

with the same concentration of developer and for the same length of time as that in the developing machine. After fixing, the series of printed pictures are examined and the one which appears the most satisfactory in the series of prints from the negative is read off from the corresponding scale of the gratings and this reading gives the operator an exact and definite means of controlling the exposure in the positive printing machine, with a corresponding scale for the control of his light in the printing machine.

Dated, March 20th, 1911.

New York City.

1059

New York, April 3, 1911!

*Shaw-Walker  
for printing  
making to be  
done*

Mr. Frank L. Dyer, *(RD)*  
Orange, N.J.

My dear Mr. Dyer:

When I tried to get you on the telephone Saturday it was with reference to a matter which I wished to speak that I thought might be of considerable interest mutually.

During the past nine months in which we have been engaged working out certain refinements of our color process relative to special emulsion, we have been seeking information and assistance from emulsionists in this country as well as from across the water.

A dry plate house from whom we had some very satisfactory emulsions some years ago before we went to Europe, are particularly desirous of co-operating with us on the development of our color plates. I have recently shown them some of my results on the color film, and they believe that they could further improve upon what we have done. They are urging us to effect some arrangement with them immediately which they think would be to our mutual benefit. We have not, however, intimated that we were negotiating with anyone, but Miss Warner and I have thought that before we went farther in the matter we should discuss it with you.

In our opinion the use of an emulsion factory for coating plates and preparation of emulsion for film in color or black and white might be a good thing. They have been able, as I have said, to produce results in the past for our color plates that has not been equalled either in quality by either the Eastman Kodak or Cramer Dry-plate Co..

F.L.D.-2

Should you care to discuss this matter with us it ought to be done very soon, as some immediate answer on the proposition is imperative.

Yours very truly,

*John H. Paine*

EDISON MANUFACTURING COMPANY

1059

April 14, 1911.

Mr. John H. Powrie,  
Orange, N. J.

Dear Mr. Powrie:

Referring to your letter of March 27th, on the subject of your new automatic film developing apparatus, I have given the subject serious consideration. I expect shortly to urge Mr. Edison to consent to the building of a new film plant in which our manufacturing processes may be completely modernized, and if this is done, a continuous developing machine, if practicable, might be a very desirable thing for us to adopt. Under the present conditions, however, I hardly think it would be worth while for us to attempt such a radical change in apparatus.

In discussing the matter with Mr. Jameson, I find that he is somewhat skeptical as to the possibility of developing films mechanically without the exercise of the human element. However, this whole question will have to be considered when we take up the matter a little later on of possibly making use of your device.

Yours very truly,

FID/IWW

President.

THOMAS A. EDISON, Incorporated

1059

July 18, 1911.

Mr. Donald Harper,  
32 Avenue de l'Opera,  
Paris, France.

Dear Mr. Harper:

Permit me to introduce my good personal friend, Mr. William C. Anderson, of Detroit, the manufacturer of the well known "Detroit Electric" car.

Mr. Anderson goes to Paris on a combined pleasure and business trip. He is a strong, active and thoroughly reliable business man, and if you have any business friends who might be interested in electric vehicles I will consider it a favor if you will introduce Mr. Anderson to them.

Any personal courtesies you may be able to show him will be very much appreciated by both Mr. Edison and myself.

Yours very truly,

FLD/IWW

President.

1059

Memo.

October 23, 1912.

Regarding the attached memorandum from Mr. Huthison, arranged to-day for him to take up the colored photographic problem with Dr. Powrie and decide what he thinks of the prospects of success and then to discuss the matter fully with me.

F. L. D.



[ATTACHMENT]

Mr Dyer.

Mr. Power is costing us a good deal of money. Has several machinists & tool makers at work on our pay roll and I haven't seen anything practical come out of the place yet. Now he wants two arc lamps he borrowed from Talking Picture Tent which they want returned to them.

I wish some definite conclusion could be arrived at as to his status - whether I am to give him what assistance or he needs or how the matter stands. I am holding up experiments we really should make in other lines & save the expense until money commences to come in, and Power is spending it with nothing to show for it.

10/22/12

2259

1059

November 6, 1912.

Mr. Powrie:

Mr. Hutchison tells me that you have not taken up  
your color process with him, as it was agreed you would do.  
I wish, therefore, that you would do this without delay,  
because it is only fair to Mr. Edison that he should be thor-  
oughly advised as to the situation.

FLD/IWd

P. L. D.

County of Essex,        }  
State of New Jersey. } ss.:

HARRY F. MILLER, being duly sworn, deposes and says: I am of mature age, reside in Orange, New Jersey, and have charge of the books and accounts of the Edison Laboratory at West Orange, New Jersey; said Laboratory being the Laboratory of Mr. Thomas A. Edison; I am personally acquainted with John H. Powrie and know that said John H. Powrie is engaged and has been in engaged in experimental work on the Warner-Powrie Process of Color Photography for more than three years at said Laboratory, and that special facilities and apparatus for such work have been provided for said John H. Powrie at said Laboratory.

Subscribed and sworn to before me  
this 15<sup>th</sup> day of August, 1913.

*Harry F. Miller*

*Harry J. Laidlaw*

NOTARY PUBLIC, STATE OF NEW JERSEY.  
COMMISSION EXPIRES SEPT. 5, 1917

(seal)

Copy of affidavit given Mr. Powrie Aug 15, 1913  
for use in suit against Vincent Co., Powrie  
& Mrs. Warner in N. Y. Ct. He

[ATTACHMENT]

A short affidavit from one of the Edison people which will show that <sup>a</sup> preliminary agreement was entered into between the Warner-Powrie people and the Edison people, and that that agreement is being carried out. That Mr. Powrie and his associates are carrying on tests and making preparations for the commercial use of the Warner-Powrie process of color photography. That the Edison people have provided at their general laboratories at West Orange, N.J. a building as a special laboratory for the carrying on of the ~~pre~~ preliminary work and have paid considerable sums of money for apparatus and supplies. That the final contract has not yet been signed or any money paid upon any such final arrangement, or in anticipation of final payments to be made under such final contract. That the execution of the final contract is dependent to a large extent upon the tests of the process and its adaptability to commercial use.

Aug 15, 1913

T. R. HADEN  
JOSEPH H. MILANS

CALVIN T. MILANS  
THOMAS R. HEATLY  
GEORGE D. HESTY

## BACON & MILANS

Counsellors at Law

SOLICITORS IN PATENT AND TRADE-MARK CAUSES  
MCGILL BUILDING, 608 G STREET, NORTHWEST  
WASHINGTON, D. C.

CABLE ADDRESS  
"NOCAM"

LONG DISTANCE TELEPHONE  
MAIN 1800

February 24, 1914.

Delos Holden, Esq.,

New York City.

Dear Sir:

Title search re. Powrie patent.  
We are in receipt of your telegram of even  
date reading as follows:

"Mail tonight abstract title patent eight  
nought two four seven one Powrie."

We have accordingly examined the assignment  
records of the Patent Office in regard to this matter,  
and as a result we find that Powrie assigned his entire  
right, title and interest to the Uniplate Company.  
This is the only instrument <sup>on record</sup> we have been able to find  
affecting the title of this patent.

An abstract of this assignment is enclosed  
herewith.

Very truly yours,

*Bacon & Milans*

Dict. FT - M.

P. S. Kindly advise us against whom to make  
this charge.

B & M.

EMMET J. MURPHY  
ATTORNEY AND COUNSELLOR AT LAW  
225 BROADWAY  
NEW YORK  
—  
TELEPHONE 8011 BARCLAY

25 February 1914.

Mr. Hardy, Legal Department,  
Thomas A. Edison Incorporated,  
Orange, N.J.

Dear Sir,-

In response to an inquiry concerning the nature of an action pending in our Supreme Court, New York County, against the Uniplate Company, Florence M. Warner, Mary Warner and John H. Powrie (Clerk's Index No. 21,264, of the year 1913), I am able to inform you that the action has never been tried. It is, however, on the general calendar and slowly approaching trial in the usual way.

The action is based on a claim that the plaintiff loaned the defendants \$5,000, to be repaid within three days, upon certain representations as to their probable ability to pay. An order to show cause was granted and upon its return, the plaintiff's application for a temporary injunction was considered and argued, upon the claim that the defendants were without means, non-residents and possessed of the single asset of the United States Patent, assigned or to be assigned to the Uniplate Company. The motion was granted August 27, 1913, upon condition that the injunction may be vacated upon defendants giving security for the payment of the plaintiff's claim with interest upon five days notice. The amount of the claim was \$5000. The order though informal grants the motion as prayed for, enjoining the defendants and each of them from selling, assigning, transferring or otherwise disposing of any and all rights of the defendants and each of

-2-

them in and to the invention of the defendant, John H. Powrie, as set forth in the annexed copy Letters Patent issued by the United States government and said Letters Patent"

The foregoing injunction is temporary, that is pendente lite, and affects the Uniplate Company directly, for that company is the holder of the United States Letters Patent. There is no action pending here in any way affecting the rights of the defendants in their ownership of the Warner-Powrie Process. The object of this injunction apparently was to provide a means of satisfying a judgment for the \$5000 in the event one were rendered.

The pleadings and all the papers relating to this action are on file in the County Clerk's office and may be called for under the above Clerk's number, and examined. If there is any further information in respect to this action which you desire I shall be glad to talk with you or your representative at this office at any time.

Yours truly,

A handwritten signature in dark ink, appearing to read "E. J. Murphy". The signature is fluid and cursive, with a large, stylized initial "E" and a long, sweeping underline.

*Copy for Mr. Holden*

C O P Y

( W. U. NIGHT LETTER )

Feb. 28, 1914.

Thomas A. Edison,  
Fort Myers, Florida.

Regarding Powrie matter, examination at Patent Office shows no clouds on patents. Unable to tell about new applications, as they are not disclosed, but Powrie claims there are none. Further investigation shows, however, that a suit for five thousand dollars was started and an injunction pending trial issued, which injunction restrains the transfer of any interest in the patent. This suit has not yet been reached for trial and Powrie claims he can settle same by paying five thousand and interest which he purposed doing with portion of fifteen thousand he desired as loan from you. With patents free, however, Powrie unwilling to give any rights under or transfer any part, but would be willing to give mortgage on patent as collateral security. Says he wants money simply as a loan for six months. Is unwilling to make new contract; at least until you return and further demonstration of product and process given. As alternative to mortgage on patent, is willing to put up stock of his patent holding company as collateral security for loan. This plan objectionable, however, as patent holding company is defendant in aforesaid suit and may be subject to other claims and obligations of which we know nothing and which we would have to assume in order to get the benefit of the patent, in case we should be compelled to realize on collateral and take over company. Mr. Powrie says there are no other claims against company. In view of conditions as outlined, don't see how we could be protected along the lines you indicated in memorandum to me for additional monies advanced, but if you think he is past critical stage



Mr. Edison.

-2-

and that now merely matter of expense necessary to produce commercial product, we could arrange so that monies loaned would be deducted from cash to be paid him under original contract, Powrie unquestionably must raise some money immediately to meet obligations no longer deferrable, but I have a question in my mind about our going in much deeper, even though process should be successful, as it is doubtful if, including two hundred thousand cash payment and royalties specified in original contract, together with cost of plant and equipment necessary to manufacture, we would <sup>ever much</sup> make money or even get our money back. Five thousand dollars might keep him out serious trouble until you return, and if you are willing we might advance him this amount without any security and take chances. Powrie's work, including five thousand cash paid him account expenses from Burpee thus far cost us about thirty thousand dollars. Wire fully your wishes.

WILSON.

[ATTACHMENT]

Extract of Mr. Edison's memo.

"let send to Patent Office and see if there are any transfers  
as to title or interest in Powrie patents on colored pictures patents,  
or applications on record or if there is any cloud on them on the  
record."

# WESTERN UNION DAY LETTER

THEO. N. VAIL, PRESIDENT

Form 2550 K

## RECEIVED AT

21 H 29 Collect Blue

Fort Meyers, Flo., Mar. 2-14

G.H. Wilson, Edison Co., Orange, N.J.

Dont care to loan Powrie any Money on basis named he only has a  
fighting chance and will require years to perfect and large sums Money  
for Factory.

Edison.

9:35Pm.



*Mr. Wilson Told Powrie  
if Mr. Edison's refused  
to do so  
full  
note of going  
pass. C.H.W.  
3/5*

March 7, 1914.

Mr. Edison:-

I beg to confirm telegram (Day Letter) of this date, as follows:

"Powrie wants a special camera and a film perforator for color work made up at once. Will cost about five hundred dollars and I will not go ahead without your approval. Everything proceeding nicely here. Another heavy snowstorm last night.

M. R. Hutchison."

The above for your information.

M. R. HUTCHISON.

1059

March 11, 1914.

Mr. Thomas A. Edison,  
Fort Myers,  
Florida.

Dear Mr. Edison:

Although a little late, it will perhaps be well to confirm the sending of night letter to you on February 28th regarding the Powrie matter, and acknowledge receipt of your telegraphic reply dated March 2nd. I do not think it necessary to quote the messages, as they are evidently both fully understood; therefore, suffice it to say that I have been and will be guided by your decision not to loan Powrie any money on basis named. Personally, I think your conclusion a wise one, as even though he should eventually succeed in perfecting his color photography, I believe it would take us a long time-- and perhaps we would never succeed in getting back ~~the~~ profits the amount we would be called upon to invest, as called for by the original agreement, namely: \$200,000 cash and in addition thereto a royalty on every foot of film sold, to say nothing of the cost of special plant and equipment necessary to produce the product.

I do not know how Powrie has arranged to handle his financial obligations, as since I advised him that you did not care to loan or advance him any money on the basis he indicated

Mr. Thomas A. Edison- 2.

he has said nothing further to me, and I have not considered it advisable to question him for fear he would again make a request on us in some other manner.

Yours very truly,

CHW/IWW

Vice-Pres. & Gen. Mgr.

Wilson

Wilson = Hutchinson writes  
that Paconic wants us to  
furnish him with perforator etc  
costing \$500 - Now I think you  
better go into this thing & fix  
matter up by changing our  
Contract. Not that we shall  
be obligated to expend much  
more money but that we  
can be secured for what we  
already have spent and for  
any further money up to  
say \$500 that would  
moreover, & it occurs to me  
such a way that should  
he fail to make the film  
practicable we should  
be paid out of the first  
monies received from

2

The Dry plate part of  
which we have no option  
This whole Paconic biz is  
in a loose state & its  
about time we had a  
lien for the money we are  
expending -

In my opinion, the Dry  
Plate part can be brought  
to perfection or nearly  
so in a year: but the  
film only has a fighting  
chance & there is only  
2 chances in 10 that  
it can reach a stage  
where it will be  
commercial - Y

have for some time believed  
 that Parson knows that  
 & only hopes to perfect  
 the Dry plate part &  
 leave us in the  
 Lurch - so you want to  
 act with tact &  
 secure our money  
 on Dry plate. Don't  
 care for option to buy it <sup>the</sup> <sup>the</sup>  
 but want 1st lien for  
 the money expended as I  
 am sure that is what  
 he is driving at & film is  
 somewhat of a bluff  
 to keep us furnishing  
 facilities & expending  
 money. <sup>of course keep option film</sup> <sup>2 drops</sup>



[ON BACK OF PRECEDING PAGE]



*Mr. Holden*

March 17, 1914.

Mr. Thomas A. Edison,  
Fort Myers,  
Florida.

Dear Mr. Edison:

Referring to your recent memo. having further reference to Powrie wanting a perforator, etc., I find you are under the impression that the agreement we have with Powrie does not include an option on the dry-plate feature of the invention, the same as it does on the film end, whereas the option does include the dry plate. Your memo. indicates, however, that you do not care to exploit this end of the business. I have therefore had a long talk with Powrie, Mr. Holden being present, along the lines you indicated, which would necessarily include the releasing of the dry plate option to him. He was rather receptive to negotiating along these lines, but rather expressed a doubt as to whether the two lines could be handled separately, for the reason that the basic patent covers both the dry plate and film, and also because a plant that would answer for the film end would with but little expense also answer for the dry plate end, whereas if separate plants had to be put up the cost would be much greater.

As regards the basic patent covering both the dry

Mr. Thomas A. Edison- 2.

plate and film, Mr. Holden explained that this could be easily taken care of by our granting a license for the use of the invention on dry plate work.

After discussing the subject at some length, Powrie said he would be willing to do almost anything in order to get things started and would therefore think over the proposition of our releasing him from the option given on the dry plate end of the business and his disposing of or making arrangements with someone else to handle that end, with the understanding *that we* <sup>*are to be reimbursed for all expenses we have disbursed*</sup> that a new contract would have to be drawn up between us covering an option on the film and only whereby the amount of cash payment as well as royalties stipulated in the present contract would be reduced to the extent of the value of the dry plate rights, which now are included therein.

He also said it would perhaps be possible to get Eastman, the Ansco people or someone else interested in taking over the entire proposition, if we so desired; in such an event he, of course, to reimburse us for all the money we had thus far expended or might expend up to the time the transfer was made, and I told him to think this over also and let us know what proposition he could submit in that direction. Until we receive his propositions, or at least a definite statement indicating that he will consider either one or the other of the above mentioned suggestions, I do not see that we can do anything whatever in the way of a new contract. He, however, said he would let us hear from him within the next few days, and when he does I will advise you further.

Mr. Thomas A. Edison- 3.

In the meantime I am not going to authorize the building of the perforator which he desires, as I do not think we should go to any more expense until we know exactly where we stand. Should you, however, disagree with my decision and decide that we should go ahead with the perforator at an expense, as Hutch advised you, of ~~about~~ \$500, you can wire me, simply saying "Go ahead with Powrie perforator", and work will be started immediately, thereby avoiding what you might otherwise consider an uncalled-for delay.

The more I consider this whole proposition the more I think you should get from under if possible, even though you have to turn the entire thing over and consider the money thus far expended as lost. The letter agreement entered into between Powrie and Dyer as it now stands provides for a cash payment of \$200,000. to be paid at the time "of the signing of the *formal* agreement", which would be when we decide the process to be commercial and we take steps to manufacture; and in addition to this cash payment, a guaranteed minimum royalty as follows:

First year after signing of agreement,	\$20,000
Second year,	30,000
Third "	40,000
Fourth, and all ensuing years during the life of the patent,	50,000 per annum.

The patent runs until 1922, or eight years more; therefore, assuming we took up the process this year, the ~~minimum~~ royalties during the next eight years would amount to \$340,000, and this, together with the cash payment, would amount to

Mr. Thomas A. Edison- 4.

\$540,000. Due to the rapid changes that are taking place in not only the motion picture but all classes of photography, together with the keen competition which is liable to spring up at any time because of someone <sup>else</sup> perfecting a color picture process, it certainly looks to me as though the ~~amount~~ <sup>idea</sup> to an expenditure of this amount of money would be a very hazardous risk.

I, of course, may be entirely wrong in my views concerning this matter, but in my position cannot help expressing them to you.

Any further instructions you care to give in connection with this matter I shall be glad to receive.

Yours very truly,

CHW/IWW

C-DE



THOMAS A. EDISON



# Thomas A. Edison, Inc. Orange, N.J., U.S.A.

Edison Phonographs and Records. Edison Primary Batteries  
Edison Kinetoscopes and Motion Picture Films  
Edison Home Kinetoscopes and Motion Picture Films  
Edison Dictating Machines. Edison Kinetophones  
Edison A.C. Rectifiers and Edison House Lighting Controllers

THOMAS A. EDISON, PRESIDENT  
C. H. WILSON, VICE PRESIDENT AND  
GENERAL MANAGER  
WILLIAM MAXWELL, SECRETARY AND TREASURER  
E. J. BERGQREN, SECRETARY AND TREASURER  
LONDON, DEALIN, PARIS, SYDNEY, BUENOS AIRES.  
CABLE ADDRESSES  
"ZYMOTIC, NEW YORK"

Thomas A. Edison,  
Fort Myers,  
Florida.

ANS. Dear Mr. Edison:  
C. H. WILSON

*Wilson* April 7, 1914.

*We will go over this when I return  
he must do something or the  
other. Or we stop*

Concerning the Powrie matter, I have as

yet been unable to get him to consent to any modification ~~what~~  
ever to the present agreement. In discussing the matter again  
with him yesterday, he said he had taken it up with his people.  
I believe there are two others interested with him in the  
Uniplate Company, who now own the patents and with whom our  
present agreement exists, and that they are considering the  
question of endeavoring to make some arrangement with the Eastman  
or Ansco Company, but as yet they have not reached a definite  
decision to do so. It rather looks as though we might have some  
trouble in connection with this matter before we are through with  
it unless we are willing to let the agreement stand as at present,  
as in my opinion Powrie is still confident of very soon producing  
satisfactory results, in which event he prefers holding us to the  
cash payment agreed upon rather than attempt to negotiate with  
anybody else for either the dry plate end of the process or both  
the dry plate and film end. He says he is progressing very  
favorably now and expects to be able to show you satisfactory  
results on your return. In the meantime I do not see that anything

Mr. Thomas A. Edison -2-

important can happen by letting matters run along as they are, but when you do return, I think we should very carefully consider the question of forcing him to make a new deal with us or throw the matter up altogether.

Very truly yours,

*Chas. A. Smith*  
Vice Pres. & Gen. Mgr.

CHW:AH

McEdison - Wilson - We are in Deep-Elmer  
Our investment in Color photography  
stands as follows:

Mich. 28/10 - Feb 28/11 - 4123.44

Mich. 1/11 - Feb 28/12 3617.

Mich. 1/12 - " " /13 - 4316.61

" 1/13 " " /14 3588.49

Exp. Wk. H.C. Ross, accounting

Penn., Jan. 1/12 - Feb 28/13 3976.07

Mich. 1/13 - Feb 28/14 3198.43

Various expts. & process 3/1/10 - 2/28/11 3941.01

Labor + material under direction of

Brassier, Apr 15/18 - Jan 1/10 27052.23

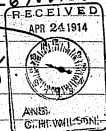
Total \$53,805.28

Of this amount, Penn.  
has expended

\$26,753.05

4/23/14

MARK







Hotel Imperial  
Broadway, 37, and 32 & 34  
New York  
Superintendent Manager

# Hotel Imperial

Robert Stafford  
Proprietor

Call or Address "Imperial"  
Telephone 6100, Madison

New York, Nov. 9 1914

Mr. E. J. Berggren.

L. A. Edwin Inc., Orange, N. J.

My dear Mr. Berggren.

I have been laid up most of this <sup>past</sup> week  
and for reasons which I can explain later  
I could not send you the enclosed note until  
now.

If convenient you may cancel the  
old note and give it to the bearer or  
mail it to me care the Imperial  
Hotel.

Our situation financially is improving  
but I shall be obliged to ask your indulgence  
for a few days more only. It is slow work  
but we are making real progress and are certain  
of success financially and otherwise.

Yours Very Truly, Robert Stafford

January 2, 1915.

Mr. John H. Fowrie,  
Imperial Hotel,  
New York City.

Dear Sir:

Will you kindly arrange to see me (my office is  
now in Mr. Edison's Library) the early part of next week, as  
there are several matters of importance I think it advisable to  
discuss without further delay. Come over Monday if possible.

Yours very truly,

CHW/INW

Vice-Pres. & Gen. Mgr.

Mr. Powrie states that he has found that his method can be best carried out by the use of a regular or geometrical pattern on the color screen as distinguished from an irregular pattern such as would be obtained by scattering the particles at random on the screen, for the reason that the differently colored spaces in a regular arrangement can be very much larger than in an irregular arrangement without being noticeable to the eye. For instance, the eye can detect a single line only  $1/5000$  of an inch wide whereas if we take lines  $1/500$  of an inch wide, that is, 500 to the inch, the eye cannot detect them as separate lines. It merely looks like a gray surface.

If we take colored particles only  $1/25000$  of an inch in diameter arranged irregularly on a surface, the eye can detect irregularities, whereas if the different color particles are only  $1/500$  of an inch in diameter and are arranged in a regular pattern, the eye cannot detect these various colors.

As regards a geometrical pattern which he prefers to use, that is, lines as distinguished from squares or oblong spaces, there is a great advantage in using lines because in order to superpose squares there is a likelihood of error in two directions whereas in superposing lines there can be an error only in one direction. In other words, the problem in superposing lines is much simpler than superposing squares or other figures of this character.

In all cases no matter what arrangement is used, either lines or squares or irregular arrangements, the diffusion principle must be used, that is, suppose the red light from a given object passes through the red part of the color screen it must then spread so as to cover a greater surface than the red colored part of the color screen. In this way, we practically get on the plate some of the red that is

cut off by the blue and green parts of the color screen adjacent the  
red section through which the light actually came, and similarly for the  
other colors.

1/12/15

*2.1.*

*Copy for  
Mr. H. H. H. H.*

January 15, 1915.

Mr. John H. Powrie,  
Imperial Hotel,  
New York City.

Dear Sir:

Referring to the subject matter of our recent conversation, we do not care to assume any further expense in connection with the development of your inventions in color photography. We have expended up to date quite a sum of money, including the amount paid for our option. This amount we think you should reimburse us for, either by deducting same from the initial payment, in case we exercise our option, or by payment of same to us in case we decide not to exercise the option. We should be glad, therefore, if you will communicate with your associates, with a view to entering into some agreement for securing this result, as for example, an agreement that if we do not exercise the option we will release you from all claims with respect to your inventions in color photography, including U. S. Patent No. 802,741 and your more recent inventions, upon payment to us of the amount we have expended and providing that our claim shall be a lien on your patent and inventions, and that the same shall not be assigned or transferred until our claim has been satisfied.

Yours very truly,

CH/AT

Vice-Pres. & Gen. Mgr.



*Hotel Imperial*  
Broadway 314 and 324 Streets  
New York  
Captain Stewart, Manager

# *Hotel Imperial*

*Robert Stafford*  
Proprietor

*Radio Address: "Imperial"*  
Telephone 6000, Hudson



*New York*, January 28th, 1915.

Mr. C. E. Wilson,  
c/o Thomas A. Edison, Inc.,  
Orange, New Jersey

Dear Mr. Wilson:-

Your letter of the 15th instant was duly received.

Of course, I will have to accept your notification as cheerfully as possible that you have decided to discontinue the work. My experience in not being given proper facilities and the lack of any appreciation of my work has been a great disappointment to me of course. I have realized that for the past two years, Mr. Edison has been losing interest in this matter, so that when we were locked out of our work shop by him shortly after the fire, it was no surprise to us. As regards your suggestion that Mr. Edison should be reimbursed for the expense of the experiments, I can hardly believe that such a suggestion comes personally from him. I haven't the heart to discuss the contents of your letter with Miss Warner and her mother and before doing so, I would really like to know that the proposition contained in your letter comes from Mr. Edison himself. I am sending a copy of this letter to Mr. Edison to-

*Mr. Edison  
the inquiry to  
a line  
1/29  
CWS*

HOTEL IMPERIAL, NEW YORK.

Mr. C. H. Wilson - #2.

January 26th, 1915.

gether with a copy of the letter which I received from you.

Very truly yours,

*John A. Brown.*

*Form for Mr. Wilson*  
*Box 13*

February 23, 1915.

Mr. John H. Powrie,  
Hotel Imperial,  
New York City.

Dear Sir:

We find it necessary to occupy the building in which your apparatus and supplies are contained at the Edison Laboratory, and we hereby call upon you to remove same before the end of the present week.

In case this is not done, we shall remove the same and hereby notify you that we shall not be liable for the loss of any of said property or damage thereto.

Yours truly,

Vice President & Genl. Manager.

*Signed and Sent  
by registered mail  
John D. Brown, Jan 2/15*



B0413

I, JOHN H. POWRIE, a resident of the City of New York, County of New York and State of New York, hereby authorize and request Thomas A. Edison, Incorporated, a corporation of the State of New Jersey, and Thomas A. Edison, or either of them, to deliver to H. C. Ross of West Orange in the County of Essex and State of New Jersey, the following material now on the premises known as the Edison Laboratory, West Orange, New Jersey:

- One complete emulsion mixer or stirrer.
- One driving mechanism for the above mentioned mixer or stirrer.
- Two emulsion bags.
- One gauge for an emulsion coating machine.
- One lot of small tools and miscellaneous articles comprising three pairs of wooden pinchers, one spanner, one wrench, one small saw, one winding crank, one lens holder casing and one piece of emery stone.
- Two tin covers for emulsion cans.
- One printing frame.
- One dark-lamp shade.
- One film-clamping device.
- Two film-reel flanges or discs.
- One arc lamp.
- One guideway or base for printing machine.
- One lot of colored crepe paper.
- One lot of photographs.
- One lot of glass and crockery jars.
- One box containing a lot of magazines and other publications on photography, a lot of dishes, knives and forks and a lot of towels and napkins.

Dated February

1915.

March 13, 1915.

Mr. J. H. Powrie,  
Hotel Imperial,  
32nd St. & Bway,  
New York City.

Dear Sir:

Mr. Berggren has turned over to this Department for collection an unpaid note for \$1100. of The Uniplate Co. endorsed by you. Please send me a remittance at once to take up this note as otherwise it will be necessary to bring suit to recover this amount.

Yours truly,

General Counsel.

DH/JV

*Mar. 18/15  
The former amount  
to remit with 2 weeks.*

~~SECRET~~  
120413  
October 2, 1915.

Mr. C. H. Wilson:

I hand you herewith Mr. McCoy's last report upon the Powrie matters. Mr. McCoy is of the opinion that Mr. Metz is interested ~~only~~<sup>only</sup> in the use of the Powrie process <sup>for</sup> the making of photographic plates or photographs printed from plates as distinguished from motion picture work which is done on films. He tells me that Mr. Taylor of Dyer & Taylor and also Mr. Frank L. Dyer have acquired an interest in the Powrie process for motion picture purposes, but he is unable to locate any studio for this purpose. This information was given to McCoy by Mr. Taylor.

I am unable to see that we can do anything towards the collection of our claim against Powrie at the present time, although possibly the filing of a suit against him might cause him to pay the amount of his notes. I do not see any use of dunning him for the account as we have been after him so long in this way. I would either leave him alone or file a suit against him.

BNCL.

DE/JU

**Legal Department Records  
Motion Pictures - Correspondence**

**Copyright Photographs**

This folder contains correspondence between Frank L. Dyer of the Legal Department and Thorvald Solberg, register of copyrights at the Library of Congress, regarding copyright applications for motion pictures scenes. The letters are from 1905 and relate to an application for a film entitled *Poor Algy*.

Approximately 90 percent of the documents have been selected.

Oct. 6th, 1905.

Register of Copyrights,

Washington, D.C.

S I R : -

In reference to the enclosed application for seven copyrights in the name of Thomas A. Edison, I beg to say that the photographs in question constitute single pictures from successive scenes of a moving picture film. Heretofore, it has been Mr. Edison's practice in securing copyrights on his moving pictures to file with the application a complete print of the entire series, sometimes hundreds of feet in length, and involving thousands of photographs. In Edison v. Lubin, 122 Fed. Rep. 240, it was held by the Circuit Court of Appeals, Third Circuit, that a series of pictures of such a character "that the difference between successive pictures is not distinguishable by the eye" may be regarded as a single photograph, and therefore, the subject of a valid copyright. It has always seemed to me that there was grave doubt, whether a moving picture representing different scenes with different actors, incidents and backgrounds could be protected by a single copyright. For this reason I have considered it safer

No. 2 Registrar of Copyrights.

to secure a separate copyright on each scene. Instead of sending a complete print of the hundreds of pictures comprising each scene, I have selected a representative picture from each scene, limiting the copyright to that picture, but depending in case of infringement upon the substantial identity of all the pictures of any scene with the copyrighted picture. If this practice is acceptable to the Copyright Office, it will materially reduce the expense of preparing matter here for copyright, and I should suppose would be also preferable to the Copyright Office as facilitating more convenient filing and reference. A single photograph in duplicate from each of the seven scenes is sent herewith, the photographs from each scene being mounted on a single card. If this is objectionable, each card can be cut in two, and if you will advise me on this point, I will see that your wishes are complied with in the future. I will be obliged if you will advise me whether the suggestions I have made meet with your ideas, so far as your office is concerned, and if so, I will follow this course in securing similar copyrights hereafter.

Kindly also let me know whether instead of sending a money order, I will be allowed to pay the necessary fees by check.

Very respectfully,

FLD/ARK.

LIBRARY OF CONGRESS,

COPYRIGHT OFFICE.

In Reply, please file...

No. FWA-WHL

WASHINGTON, D. C. Oct. 11, 1905.

Dear Sir:

I have the honor, by request of the Librarian of Congress, to acknowledge receipt of your letter of October 6th, and your application and remittance of \$3.50 for seven entries under the title "Poor Algy," Scenes 1 to 7, in the name of Thomas A. Edison.

You state that,

"Heretofore, it has been Mr. Edison's practice in securing copyrights on his moving pictures to file with the application a complete print of the entire series, sometimes hundreds of feet in length, and involving thousands of photographs. In Edison v. Lubin, 122 Fed. Rep. 240, it was held by the Circuit Court of Appeals, Third Circuit, that a series of pictures of such a character "that the difference between successive pictures is not distinguishable by the eye" may be regarded as a single photograph, and therefore, the subject of a valid copyright. It has always seemed to me that there was grave doubt whether a moving picture representing different scenes with different actors, incidents and backgrounds could be protected by a single copyright. For this reason I have considered it safer to secure a separate copyright on each scene."

This opens up legal questions of some difficulty, which should receive very careful consideration before action is taken. The matter will therefore be taken under advisement and a more extended reply will be sent to you as soon as practicable. In the meantime, your application and remittance will be held to your credit under date of October 7th as 25631, to which number please refer in future correspondence. Whatever entries are made hereafter upon this application will be dated October 7th; the date of the receipt of the titles.

In reply to your question as to remittances I would state  
that if it is more convenient for you to remit by means of check,  
the same will be accepted.

Respectfully,

*Thorvald Solberg*  
Register of Copyrights.

Frank L. Dyer, Esq.,  
Edison Laboratory,  
Orange, N. J.



**Legal Department Records  
Motion Pictures - Correspondence**

**Feed Mechanism**

The one selected item in this folder is a letter from 1905 by Frank L. Dyer of the Legal Department. It concerns an exhibiting machine designed by Edwin S. Porter and its possible infringement of a patent issued to Thomas Armat in 1901.

The unselected material includes correspondence with patent attorneys Bacon & Milans of Washington, D.C., regarding a patent for a kinetographic camera issued in 1899 to Oscar B. Depue of Chicago.

Oct. 27, 1905.

William E. Gilmore, Esq.,  
Pres't - Edison Mfg. Company,  
Orange, N.J.

Dear Sir:-

Mr. Moore has asked me to express my opinion on the question whether the proposed small exhibiting machine with eccentric feed movement, designed by Mr. Porter, can be marketed without infringing any existing patents.

I understand the machine in question is to be put out as a direct-view kinetoscope, in competition with the mutoscope. The only patent disclosed in my search containing claims that would appear to embarrass us in any way is the patent to Armat, No. 673,992, dated May 14th, 1901. This Armat patent shows practically the same feed movement in a projecting machine, having a long period of illumination and with a slack formed in the film between the exposure opening and the upper feed wheel. The claims of the Armat patent are, however, not limited to the eccentric feed device, and if any of these claims is infringed by the proposed direct feed kinetoscope, the same claims would be just as certainly infringed by the

No. 2 - W.E.G.

projecting machines which we have put out for many years past. The application for the Armat patent was filed February 19th, 1896 and the patent was not issued until May 14th, 1901. During this period, the Edison Manufacturing Company began to manufacture projecting kinetoscopes practically like those now used, and this business has been continued without interruption ever since. If Armat believed that these machines made and sold by the Edison Manufacturing Company infringed his patent, it was incumbent upon him to establish his rights as soon as the patent issued. This, he failed to do, and in my opinion, he could not now succeed in establishing this patent, as against our machines, even if he ever contemplated doing so. Apparently, however, Armat never regarded the patent in question as of sufficient solidity to warrant a suit thereon, and I think it very clear from an examination of the history of the application, and particularly of the interference with Latham and Casler, in which this application was involved, that any novelty and invention in the patent rest on a very vague and shadowy foundation. Whether Armat has finally and definitely given up any idea of bringing suit on this patent is unimportant, because in my opinion, he could never prevail against us on the machines which we have been continuously putting out for the past eight or ten years.

The question then is, would the situation be changed if we should put out an additional type of machine,

No. 3 - W.F.G.

identical with the specific apparatus disclosed in the patent? As I have before said, the claims of the patent are not limited to the particular feed mechanism shown, but are broad enough to cover any and all forms of intermittent feed mechanism. Would it be possible for Armat, should we put out the proposed machine, to bring suit against us and assert that his patent should be considered as limited to an "eccentric feed"? In my opinion, this could not be effectively done, first, because under the authorities, the courts cannot, in construing a patent, practically re-construct the claims, which would be necessary if the patent were regarded as being limited to an eccentric feed movement, and second, because during the prosecution of his application, Armat presented a claim covering "a rotating element adapted to intermittently engage and move the film a predetermined distance once during each revolution" which claim was rejected on patent to Demery, No. 544,480, dated August 13, 1895, whereupon the claim was erased. Under these circumstances Armat must be held to have abandoned any claim on the eccentric feed mechanism, and he would be estopped from asserting any construction for his claims that would specifically cover such a feed mechanism.

In conclusion, therefore, I am of the opinion that the proposed machine can be safely put out without infringing any existing patents. I will suggest, however, in the

No. 4 - W.E.G.

event that this matter is gone ahead with, it might be well to file an application for a patent on the machine when its final form has been determined.

Yours very truly,

FLD/AFK.

**Legal Department Records  
Motion Pictures - Correspondence**

**Foreign Films**

This folder contains correspondence and other documents relating to copyright issues and kinoscope films purchased in Europe for duplication in the United States. The documents are from 1904. Most of the letters are written by Frank L. Dyer of the Legal Department and patent attorneys Bacon & Milans of Washington, D.C. Some of the items contain descriptions of specific films from the Warwick Trading Co., Ltd., of London and Pathé Frères. Also included is correspondence concerning a suit filed by the American Mutoscope & Biograph Co. against the Edison Manufacturing Co.

All of the documents have been selected.

*Copyright Search*

5-28-104.



Mr. D Y E R :

We have to-day received four (4) films from Europe titles of which are "Smoked Out", "Duck Hunt", <sup>Canting & Courting</sup> and "Capture and Execution as Spies of two Japanese Officers". We wish to make negatives of these films, but before doing so would request you to ascertain whether or not they have been copyrighted in this country.

(W.S.T)

J. N. N.

June 1, 1904.

Messrs. Bacon & Milans,  
908 G Street,  
Washington, D.C.

Gentlemen:-

I have on hand four films for use in kinetoscopes, which were obtained abroad, and I wish to ascertain whether or not any of them have been copyrighted in this country. I will therefore give you a short description of the pictures on these films, and request that you make a search covering the titles of all films copyrighted in this country during the past six months. Unless there is some way of distinguishing such films from other photographs, it may be necessary for you to search through the titles of all photographs copyrighted within this period.

The first film is entitled "Smoked Out". A country girl appears upon the scene with a tin bucket, which she sets down by a well or tank of water. A young man enters and they sit on on a convenient bench and indulge in kissing, etc. Somebody is seen, or heard, approaching, and the young man conceals himself in a haystack. The somebody appears on the scene and is an older man dressed as a countryman, and probably is the girl's father. He sits down on the bench, lights his pipe and throws the match where



No. 2 Messrs. Bacon & Milans.

it ignites the hay. Clouds of smoke arise and the young man is smoked out. He rushes to the tank and jumps in, and the smoke continues to arise. After he gets out of the tank he grapples with the father, and the fire in his clothing is finally smothered.

The second film is entitled "Tramps Duck Hunt", and the picture consists in two ragged tramps chasing a live duck. They chase it first from a farm yard down the road, the duck constantly eluding them, and the tramps constantly falling over rocks and over each other. The road gets very rocky, and the duck finally takes to the woods, and then to a brook, into which the tramps plunge and continue the chase, finally going over a little water-fall and getting thoroughly soaked with water.

The third film is entitled "Courting" and shows a stylishly dressed couple sauntering along a handsome street. The man steps to the curb and signals a handsome; the couple get into the cab and drive off. The man kisses the girl, and then puts up an umbrella in front of them continuing the drive concealed in this manner. This portion of the film ends with the word "Caught" in large letters. The next scene shows a closed carriage driving towards the spectator; it stops and a couple get out, together with eight or nine small children of different sizes. The cabman evidently holds the man up for an exorbitant fare, and they have a little rumpus.

The fourth film is entitled "The Capture and Execution As Spies of Two Japanese Officers". There are two Japs disguised as coolies, who appear on the scene, the background of which is

No. 3 Messrs. Bacon & Milans.

a freight car or train on a railroad track. They crawl under the cars and disappear. The Russian soldiers enter and sentries are posted by the train, only one sentry being visible after the squad has disappeared. The Japs seize an opportunity when the sentry's back is turned to climb into the freight car. As the sentry passes they jump on him, throw him to the ground, apparently killing him. They take off his clothing and one of the Japs puts it on, <sup>in</sup> this way disguising himself as a Russian soldier. They get into the car again and as another sentry comes along, they jump on him and tie him up against the car, they then put sticks of dynamite under the track, light them and run off. The Russian soldier kicks at the burning fuse and a crowd of Russian soldiers come running in and prevent the explosion. The next scenes show the pursuit of the Japs and their capture. The Japs run, followed by a crowd of Russians, and take refuge upon a pile of wood, from which they are easily dislodged and are marched away. Then follows a Court Martial, before three officers, in which the Japs appear in Officers' uniform. The execution follows, the Japs standing side by side, facing the audience and the firing squad being between the Japs and the audience with their backs towards the latter. The first volley kills one officer, but only wounds the other, so that a second volley is given. The Japs are then placed in shallow graves and buried.

The films entitled "Smoked Out" and "Courting" are marked "Copyright Warwick Trading Company, Ltd. London". The film entit-

No. 4. Messrs. Bacon & Milans.

led "Duck Hunt" is marked "Sheffield Photo Company, Norfolk Street, Sheffield". The Japanese Spy Film is marked "Paul, 68 High-holborn, London".

You will have to use your judgment as to whether any of the titles of copyrighted films are such as would appropriately be applied to the series of pictures such as I have described. An early reply is desired, as films of this description lose most of their value unless used at once.

Yours very truly,

DR/ARK.

I.  
I. S. BACON,  
ATTORNEY AT LAW.

J. H. MILANS,  
ATTORNEY AT LAW.

BACON & MILANS,  
ATTORNEYS AND SOLICITORS IN PATENT CAUSES,  
NO. 908 G STREET, NORTHWEST.  
(ROOMS, 410-415.)



WASHINGTON, D. C., June 2nd, 1904.

Frank L. Dyer, Esq.,  
Orange/ N. J.  
Dear Sir:-

We are in receipt of your favor of the 1st inst., requesting us to ascertain whether certain Kinetoscope films have been copyrighted in this country. We called today at the office of the Registrar of Copyrights relative to this matter and he informed us that there was in his office an index of the claimants for copyrights and that he would have a search made therethrough for the purpose of ascertaining whether any of the parties referred to in your letter had secured within the last six months copyrights on kinetoscope films, such as those described by you. He made such a search and informed us that none of the parties mentioned in your letter had secured any such copyrights. The Registrar informed us that this was in his opinion very good evidence that these films had not been copyrighted. He stated, however, that if we were so disposed we could examine all of the films which have been filed within the last six months. We informed him that we desired to make every effort to ascertain whether or not these films had been copyrighted and he has arranged matters so that we can get at the specimen films tomorrow morning. Although we presume that

BACON & MILANS.

SHEET NO. 2 DATE June 2, 1904.

this matter will take some little time, since we have been informed that a very large number of films have been filed within the last six months, we will endeavor to report to you the results of our search tomorrow evening.

Yours very truly,

*Bacon & Milans.*

Dict. H-D.

June 3, 1904.

Messrs. Bacon & Milans,  
908 - G Street,  
Washington, D.C.

Gentlemen:-

Your favor of the 2nd inst. at hand. The fact that no films have been copyrighted by any of the parties mentioned in our letter would not be conclusive in regard to the non-copyrighting of the films, as it frequently happens that American dealers purchase the copyright privileges for this country and apply in their own name as proprietor. However, your search will settle the matter one way or the other.

I should have stated in my first letter that there is very little profit in making such films as these, as only a few may be sold, and would therefore request that the expense be kept down as much as possible.

Yours very truly,

DR/ARK.

L. B. BACON,  
ATTORNEY AT LAW.

J. H. MILANS,  
ATTORNEY AT LAW.

**BACON & MILANS,**  
ATTORNEYS AND SOLICITORS IN PATENT CAUSES,  
NO. 908 G STREET, NORTHWEST.  
(ROOMS, 410-415.)

CABLE ADDRESS "BACON"  
LONG DISTANCE TELEPHONE.

WASHINGTON, D. C., June 3rd, 1904.

Frank L. Dyer, Esq.,  
Orange, N. J.

Dear Sir:-

We have today spent considerable time at the Congressional Library in making an examination of the Kinetoscope films which have been filed there for the purpose of securing copyrights, and have in fact examined every film which has been filed within the last six months but have been unable to find any which conform to the description of the films given in your letter of the first. Owing to the manner in which the films are kept we did not examine the pictures on the films themselves, but merely the titles stamped thereon. If we had found any titles which would suggest that the films contained any such pictures as those described in your letter, we would have examined the films themselves, but we found no such films. We were assisted in our search by a clerk detailed by the Registrar of Copyrights.

Very truly yours,

Dict.H-D.

*Bacon & Milans.*



[ATTACHMENT]

AMOUNT CHARGED:

Date June 15/64

Attorneys E. A. Reger

Items For copyright

search in re

kinetoscope films

Amount \$25.00

BACON & MILANS.



Moving Picture Copyrights.

June 4, 1904.

John R. Schermerhorn, Esq.,  
Edison Mfg. Company,  
Orange, N.J.

Dear Sir:-

As you know, the Biograph Company has an arrangement with one or more foreign film manufacturers by which that company has an option to copyright in this country any films manufactured abroad, the arrangement being such that the foreign manufacturer agrees not to publish the film abroad until the Biograph Company has secured the copyright in this country. Recently the Biograph Company sued the Edison Mfg. Company for infringement of copyright, and upon looking into the matter I found that the film which we were selling was a duplicate of a foreign film sent us by Mr. White, and which apparently was not copyrighted. As a matter of fact, this film was copyrighted in this country by the Biograph Company, so that on the face of things we have no defence at all, although of course our infringement was innocent and we cannot be subject to damages.

Yesterday I had a conference with the attorney for the Biograph Company, and explained the situation to him and assured

No. 2 - Jno. R. Schermerhorn, Esq.

him that the manufacture of the infringing film would be discontinued by us. At the same time, however, this thing is likely to happen repeatedly, as it is very difficult and more or less uncertain for us to assure ourselves that any foreign films that we wish to copy here may not, in fact, be copyrighted in this country. I therefore made the suggestion that if the Biograph Company would advise us of all films which it copyrights in this country, we in turn, would advise them of all films which we copyright, as of course they have no more desire to get into copyright litigations than we have. In making this suggestion, however, I was careful to say that it did not come from my clients and may not be approved by them. I wish you would advise me on this point, in order that I may know how to act in case the Biograph Company is disposed to adopt the suggestion.

Yours very truly,

FLD/ARK.

Mr. Moore:-

I return the boxes of films submitted to me, and find nothing on them indicating that they have been copyrighted in this country, although the films made by the Warwick Trading Company, Ltd. appear to have been copyrighted in Great Britain. I see no reason therefore, why you should not duplicate these films, with the understanding that you should save at the introductory part of each and about a foot of the pictures. Of course, if it should later develop that any of these films have been copyrighted in this country, we will have to stop making them.

I notice on the Pathe films the Rooster trademark, which of course must not be imitated.

XRK.

F.L.D.

June 6, 1904.

June 6, 1904.

J. M. Maulty, Esq.,  
Edison Manufacturing Co.,  
Orange, N. J.

Dear Sir:-

In response to your letter of May 28th, 1904, concerning the four films<sup>444</sup> entitled "Smoked Out", "Duck Hunt", "Canting and Courting" and "The Capture and Execution of Two Japanese Officers", I have had a search made at the office of the Registrar of Copyrights, which included the titles of all films copyrighted within the last six months. The search disclosed no film having a title which would be appropriate to either of the films in question, or which would suggest that the copyrighted films contain any such pictures as those upon the four said films. There appears to be no reason, therefore, why you should not proceed to copy the films.

Yours very truly,

DE/MS.

June 6, 1904

Duplicating Foreign Films.

Alex. T. Moore, Esq.,  
Edison Mfg. Company,  
Orange, N. J.

Dear Sir:-

As I advised you personally this morning, it is almost impossible, except at a large expense, to determine with certainty what foreign films may be copyrighted in this country by our competitors. In fact, the expense of such a search in every case would be simply prohibitive. There is, therefore, always the risk that some film which may be purchased in London by Mr. White may be copyrighted in this country by the Biograph Company. That is a risk which, so far as I can see, we will have to take.

I renew my suggestion, however, that in the case of each foreign film which we may duplicate you save the copyright mark and say about a foot of the film, in order that there may be no mistake as to the subject matter. The rest of the film may then be sold to Mr. Waters. If, after this precaution, we find that the Biograph Co. has in fact copyrighted any film which we have been duplicating, we can simply stop duplicating the copyrighted film.

Yours very truly,

**Legal Department Records  
Motion Pictures - Correspondence**

**Lubin, Sigmund**

This folder contains correspondence and other documents relating primarily to the use of the trade names "Universal" and "Exhibition" on projecting machines produced by Philadelphia manufacturer Sigmund Lubin. The selected items are from 1904.

Approximately 40 percent of the documents have been selected.

July 14, 1904

Edison Manufacturing Company:

Mr. S. Lubin,  
21 South 8th Street,  
Philadelphia, Pa.

Dear Sir:-

I am informed that you advertise your projecting machines with the trade names "Universal" and "Exhibition" respectively, the former being the cheaper machine.

I beg to call your attention to the fact that the Edison Manufacturing Company adopted these trade names for the identification of its own projecting machines, and that Company also charges less for its "Universal" machine than for its "Exhibition" machine. There are so many other names which you could select without conflicting with my client's interests, that I can regard your appropriation of these trade names as nothing less than unfair competition. I, therefore, request that you desist from using these trade names, and unless you immediately advise me that this will be done, I shall proceed against you with a suit for injunction and damages.

Yours very truly,

WLD/WM.

Counsel Edison Mfg. Co.

For 2, 3 and 4 Persons.  
Address **W. B. WATSON**  
46 Johnson St., Brooklyn, N. Y.

**S. LUBIN,** LARGEST MANUFACTURER  
IN THE WORLD.  
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LOCAL AND LONG DISTANCE  
TELEPHONE CONNECTION

CABLE ADDRESS  
"LUBIN," PHILADELPHIA

**S. LUBIN**  
MANUFACTURING OPTICIAN  
INVENTOR AND PATENTEE OF  
MOVING PICTURE MACHINES AND FILMS  
21 S. EIGHTH STREET

PHILADELPHIA, PA., July 18, 1904, 190



Frank L. Dyer,  
Orange, N. J.

Dear Sir:-

Your letter of July 14th. received. I have forwarded the same to Mr. Lubin who is at the present time at the St. Louis Exposition. After his return he shall communicate with you concerning the matter.

Yours truly,

*S. Lubin*  
*to D. Baer*

July 19, 1904.

Edison Mfg. Company.

S. Lubin, Esq.,

21 South 8th Street,

Philadelphia, Pa.

Dear Sir:-

I am in receipt of a letter from Doctor Bear of the 18th inst. informing me that Mr. Lubin is at present in St. Louis. Can you advise me when he is expected to return? Of course, I do not wish to be unduly insistent in this matter, but at the same time, since in my opinion, our rights are being infringed, I think that the question should be considered by him with reasonable promptness.

Yours very truly,

ELD/ARK.

Counsel for Edison Mfg. Company.

LOCAL AND LONG DISTANCE  
TELEPHONE CONNECTION

CABLE ADDRESS  
"LUBIN," PHILADELPHIA

**S. LUBIN**  
MANUFACTURING OPTICIAN  
INVENTOR AND PATENTEE OF  
MOVING PICTURE MACHINES AND FILMS  
21 S. EIGHTH STREET

PHILADELPHIA, PA. July 20, 1904. 190

Frank L. Dyder,  
Orange, N. J.

Dear Sir:-

In answer to your letter of July 19th., we want to say that we expect Mr. Lubin the first part of next week when we will bring the matter before him. You will then hear further from us.

In the meantime, we remain,

Yours truly,

*S. Lubin*  
*F. D. Baer*

ST. 780

LOCAL AND LONG DISTANCE  
TELEPHONE CONNECTION

*file*  
**S. LUBIN**

COLE ADDRESS  
"LUBIN," PHILADELPHIA

MANUFACTURING OPTICIAN

INVENTOR AND PATENTEE OF

MOVING PICTURE MACHINES AND FILMS

21 S. EIGHTH STREET

PHILADELPHIA, PA. *July 25, 1904* 190

Frank L. Dyer,

Orange, N. J.

Dear Sir:-

In answer to your letter of the 19th., I wish to say that Mr. Lubin has not returned as yet and I do not know positively when I will see him but to avoid the legal entanglements up to his return, I changed the names of our machine as you will see in this week's Clipper.

After Mr. Lubin has returned and our lawyer has been consulted as to the validity of your claim, you will hear from me again.

In the meantime, we await,

Yours truly,  
*Frank L. Dyer*

August 6, 1904

Edison Manufacturing Co:

Mr. S. Lubin,

21 South 8th Street,

Philadelphia, Pa.

Dear Sir:-

Returning to my office to-day, I find your letter of the 29th ult., advising me that you have changed the names of your machines, and I thank you for your prompt compliance with my request in this matter.

Yours very truly,

FLD/DM.

**Legal Department Records  
Motion Pictures - Correspondence**

**Mutoscope and Related Patents**

This folder contains correspondence, patents, drawings, and other documents relating to the kinetoscope, the mutoscope, and additional machines for filming and exhibiting motion pictures. The one selected item is a 1905 letter from Frank L. Dyer to Alex T. Moore, manager of the Kinetoscope Department of the Edison Manufacturing Co. The letter concerns the company's plans to manufacture "a moving picture exhibiting machine similar to the mutoscope for use in combination with the phonograph" and possible infringements of the patents of other inventors.

The unselected material consists primarily of approximately thirty U.S. patents pertaining to the kinetoscope, the mutoscope, and other machines. Most of the patents were issued to inventors in the United States, including Herman Casler, Henry O. Costello, Warren B. Davis, William K. L. Dickson, Charles T. Ellsworth, C. Francis Jenkins, Grace L. Jenkins, Harry N. Marvin, Enoch J. Rector, and Lawrence P. Thompson. Also included are patents issued to European residents, such as Auguste and Louis Lumière of France; William S. Simpson and Henry W. Short of Great Britain; and Oskar Messter of Germany.

Y V  
Nov. 20, 1905.

Alex. T. Moore, Esq.,  
Mgr.-Kinetoscope Dept., Edison Mfg. Co.,  
Orange, N.J.

Dear Sir:-

In accordance with your request I have looked into the matter of the Mutoscope patents for the purpose of advising you whether the company could manufacture a moving picture exhibiting machine similar to the mutoscope for use in combination with the phonograph without infringing any existing patents.

The question is not as simple and as free from doubt as I expected that it would be. As I explained to you, the broad idea of rapidly and successively bringing a series of cards with photographs thereon into view, was disclosed in the patent to Sellers, No. 31,357, dated February 5th, 1861. While the idea of mounting the pictures on a series of closely assembled cards which are exposed by flexing the cards rearwardly and permitting them to escape successively and pass out of the field of view by reason of their resiliency is disclosed in patents to Van Hoevenbergh, No. 258,164 of May 16th, 1882, and 259,950 of June 20th, 1882, copies of which are enclosed.

No. 2 - Alex. T. Moore, Esq.

I find, however, that as a result of my examination, existing patents practically cover all forms of mutoscope arrangements in which the photographic cards are mounted on a reel, drum or shaft, as distinguished from an endless belt.

For example, the Farnum patent, No. 547,066, October 1, 1895 (copy enclosed), covers an arrangement in which the photographs are secured to a drum or shaft by a resilient connection which moves the photographs, ~~and~~ when released, quickly across the field of view. With this arrangement, the photographs are not flexed, but remain perfectly flat.

The Casler patent, No. 549,309 of November 5th, 1895 (copy enclosed) covers an arrangement in which the photographs are radially mounted on a drum or shaft, and their elasticity is relied upon to move them past the field of view when successively released.

The Casler patent, No. 597,759 of January 25th, 1898 (copy enclosed) covers an arrangement in which the movement of the pictures past the field of view is effected by interposing thin flat springs between the successive photographs.

Re-issue patent to Chance, No. 11,650 of February 15th, 1898 (copies of which are exhausted) covers an arrangement in which the picture cards, instead of being secured radially to a shaft or drum, are secured tangentially thereon.

The Gillette patent No. 696,869 of April 1, 1902, (copies of which are exhausted) covers an arrangement in which the photographs are mounted perpendicular on the side face of a disc.



No. 3 A.T.M.

It seems to me that the several arrangements which are thus covered by the patents above referred to, practically include all the available schemes for mounting the photographs on drums or discs, although perhaps Mr. Weber or Mr. Aiken may be able to suggest a construction sufficiently different from those of the patents, as not to be included in the scope of the claims. It is also possible that as a result of a further examination, I might conclude that the patents above referred to are not valid, and that various arrangements in which the photographs are secured to drums or shafts could be safely used, but to do that would involve considerable expense and the matter would not be definitely settled except by litigation, which we should, of course, avoid. Assuming the patents to be valid, their claims would, in my opinion, prevent you from using any arrangement in which the photographs are mounted on a drum or shaft, unless as I have stated, Mr. Weber or Mr. Aiken can produce a device differing radically from those heretofore employed.

The next best thing to do in my opinion, is to carry the cards on an endless belt, and this can be safely done. Of course, many patents have been granted on machines of this sort following the original Sellers patent of 1861, and before putting out a machine, I suggest that a further examination be made to satisfy ourselves that claims on details of construction are not infringed. Of the many patents which I have examined, I have selected the following as disclosing structural features which might inadvertently be used, but which, of course, should be carefully avoided:-

No. 4 - A.T.M.

The Dickson patent No. 636,500 of November 7th, 1899, (copy enclosed) showing specifically a belt machine, covers an arrangement in which two stops are employed, one of which successively releases the pictures and the other of which successively arrests the pictures flatwise in position for observation. This arrangement, you will note, is quite different from that disclosed in the Casler patent No. 549,309, in which a single stop is used, the pictures being successively observed before being released, whereas with the Dickson patent the pictures are successively observed after being released.

The Casler patent, No. 652,714 of June 26th, 1900, (copy enclosed) discloses mechanism for controlling by a <sup>coil</sup> ~~coil~~ the operation of the picture carrier, and releasing the pictures from tension at the end of the operation, and particular care should be taken not to copy any of these features.

The Koopman patent, No. 713,312 of November 11, 1902, (copy enclosed) covers an apparatus in which a number of lenses for viewing the pictures are employed, whereby the photographs can be observed simultaneously by several people.

The Warren patent No. 721,261 of February 24th, 1903, (copy enclosed) covers a machine in which the photographs are secured to an endless belt by means of an accordion plaited strip.

The Jenkins patent No. 779,364 of January 3, 1905, (copy enclosed) covers an arrangement in which the photographs are secured in position by an elastic cement.

Although I have drawn your attention specifically to

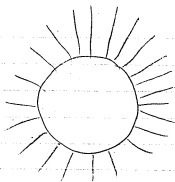
No. 5 - A.E.M.

a few patents covering constructional details which in the designing of a new machine might otherwise be inadvertently copied, kindly bear in mind that there are a large number of other patents containing claims on other details, so that in order to be safe, I repeat my suggestion that after you have settled on the form of machine to be used, you submit drawings of the same to me, and I will give you a final opinion as to whether its construction infringes any patents. For this purpose, kindly preserve the enclosed copies of patents, as I have no other copies of the same.

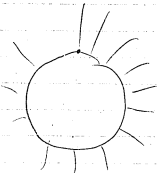
Yours very truly,

FLD/ARK.

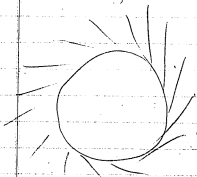
[ATTACHMENT]



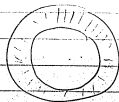
Radially  
with flexible leaves



Radially  
with uniform leaves



Irregularly



**Legal Department Records  
Motion Pictures - Correspondence**

**National Waterproof Film Company**

This folder contains correspondence, agreements, and other documents relating to a waterproof, protective coating used on films manufactured by the Edison Manufacturing Co. and other licensees of the Motion Picture Patents Co. The selected items cover the years 1909-1910. Most of the correspondence is by Frederick K. Babson, Walter A. Daniels, and Frederick B. Thompson of the National Waterproof Film Co. and by George F. Scull of the Edison Manufacturing Co. and Motion Pictures Patent Co. Some of the documents relate to meetings with George Eastman of the Eastman Kodak Co., Jeremiah J. Kennedy of the American Mutoscope & Biograph Co. and General Film Co., William N. Selig of the Selig Polyscope Co., and George K. Spoor of the Essanay Film Manufacturing Co.

Approximately 20 percent of the documents have been selected. The unselected documents include directors' minutes; financial statements; patent applications and drawings; and an agreement involving Babson, Daniels, and Thompson.

# The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

Telephone Kedzie 694

2115-2117 West Adams Street

Chicago,  
March,  
29th,  
1909.

Frank L. Dyer, Pres.,

Motion Picture Patents Co.,

New York, N. Y.

Dear Sir:-

We assume that you have heard of our process. That you may know all about it we suggest that you have us prepare a reel which can be thoroughly tested under your immediate supervision; after this and before incorporating our business and its patents the writer would be glad to spend an evening with you in New York. It is possible that mutual advantages might result.

We are in no particular hurry, except as to sample reel which should be done at once to provide ample time for your complete investigation.

Requesting early consideration, and reply, we remain

Yours very truly,

NATIONAL WATERPROOF FILM CO.

PER *W. A. Quail*

Orange, N.J., April 2, 1909.

National Waterproof Film Company,  
2115 West Adams Street,  
Chicago, Ill.

Gentlemen:-

Yours of the 29th ult. has been received by Mr. Dyer, who directs me to say that he is interested of course in investigating any new process which will improve film, but that he does not understand what your process does, nor what you would like to have him do in order to test it. Is he to understand that you wish to have a film sent to you so that your process may be applied to it, or do you submit a reel to be tested by us?

Yours very truly,

GFB/ARK.

Secretary.

7646

June 3, 1909

W.D. Daniels, Esq.,  
National Waterproofing Film Co.,  
2115 West Adams Street,  
Chicago, Ill.

My dear Mr. Daniels:-

On Tuesday last, a section of non-inflammable film was forwarded to you for Mr. Thompson's experiments. I have only just been able to interview our Chemist in regard to the acetate of cellulose and its solvents, in which Mr. Thompson is also interested. I find that this acetate of cellulose cannot be purchased in this country and is quite expensive, but our Chemist has agreed to make up some and coat a section of film with it to ascertain whether or not it is practicable. This matter is of course of no great urgency, in view of the fact that non-inflammable film will not be on the market for sometime.

In regard to the other matters to which you wished me to call Mr. Dyer's attention, I am unable to write you very definitely at this time. Mr. Dyer suggested that either he or I would again come to Chicago in a short time and these matters can be definitely determined then. Mr. Dyer suggests that while it would be proper for you to continue to coat film for independents, you should be very



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W.D. Daniels, Esq.

careful about making any definite contract with Murdock.

Yours very truly,

GFS/ARK .

Assistant to Vice-President.

Noted  
by Mr. Dyer  
6/30/09

Secure -  
Anderson, then  
if of no further  
value Dyer

June 21, 1909.

Mr. Dyer:-

I hand you herewith copy of an agreement between Babson and Daniels, which was executed by them on the 15th inst. I also hand you an agreement in duplicate between Mr. Edison and Babson, which has been signed by Babson. If this last agreement is satisfactory, Mr. Edison should execute it in duplicate, and an executed copy should be sent to Mr. Babson. I explained to Mr. Babson that you had not seen this agreement, so that if there are any points which you think should be changed it may be readily done.

No license agreement between the Edison Company and the Waterproofing Company was signed, of course, but I hand you herewith a proposed agreement, copy of which was left with Daniels.

Daniels is now getting bids on the cost of making the coating and drying machinery. These machines as at present designed have a capacity of about 12 reels per day. It would probably be best for the Edison Company to install three of these machines, in order to provide for emergencies and the possibility of the machines not running steadily. Mr. Daniels estimates, and I agree with him, that each machine will cost about \$500. and with the air pump and tank necessary for a set of three machines this involves an investment of \$1800. for the Edison

Company plant. Coating material at the present time cost them about \$2. a gallon, and one gallon coats four reels. In order to provide for the aging of this material, enough should be mixed to be at least one month ahead of the demand, and this will involve a further expenditure of about \$300. for the Edison Company.

The pay-roll of the Waterproofing Company at present is about \$125. a week, Daniels and Thompson taking \$15. each, and the rental is \$25. a week. The amount of business done by them does not pay these expenses, ~~by~~ reason of the great variation in the work from week to week, ~~and~~ Daniels could not give me very much of an idea what they could expect their income to be.

Assuming that the Edison Company alone goes into this proposition, it would be at least two months before the machinery can be built and installed, and during that time Daniels and Thompson would be entitled to \$30. per week. This will raise the weekly expenses to \$150. roughly, and will require \$1200. before the machinery is installed. This, with the \$1800 for the machinery, and \$300. for the material, will involve about \$3300. before any royalties will begin to accrue, and since these royalties would not be paid except possibly at the end of each quarter, enough more money would have to be provided for to pay the running expenses, which would probably involve about \$2,000. more for a quarter.

To summarize; an estimated expenditure of between five and six thousand dollars would be required (before any quarterly royalties would be collected) to pay expenses to install machinery for the Edison Company, and to provide coating material in advance of the demand.

The approximate cost per reel, on the basis of \$2. royalty, and \$4. a gallon for the coating material, (which includes a profit of 100%) and labor, will be \$3.25.

I also hand you herewith three sections of film, one being inflammable and coated, one being non-inflammable and coated, and the other non-inflammable and not coated. You will note that the coating makes the non-inflammable film somewhat inflammable. Mr. Aylsworth has started on an experiment to determine whether or not the solution of acetate of cellulose can be applied to a film.

So far as the art developed in the Patent Office searches is concerned, apparently there is nothing to affect the validity of any patents which may be obtained on the present inventions of the Waterproofing Company. The drier is undoubtedly new, although of course it is possible to construct a drier on radically different lines. The coating machine is novel, although, of course, coating machines for similar purposes have been made before and probably could be adapted for this new use. The air head is probably radically new, but I am somewhat disturbed about the probability that the coating can be

done by other methods, but possibly not so satisfactorily. Possibly, patents on the process and product are very likely open to attack on the ground of prior use. You will remember that Mr. Marvin said that he had coated films a long time ago and Mr. Selig states that he did so nine years ago, reciting at considerable length the details. The latter claims that he prevented the holes from filling up by running the wet film over a sprocket. Whether or not these uses were abandoned experiments ~~ones~~, it is of course very difficult to state now.

The following matters should be determined:-

- (1) Is the Edison-Babson agreement satisfactory?
- (2) Is the Babson-Daniel agreement satisfactory?

Note that there is no provision for the equal division of the income and that even if Mr. Edison takes out \$15,000. worth of stock, he will obtain only 25% of the dividends, and therefore, the actual cost to the Edison Company, figuring a profit of \$2.50 for the Waterproofing Company per reel, would be over \$2.50 per reel.

- (3) Will the present coating material be satisfactory, or must it be made absolutely fireproof?
- (4) Is the proposed license agreement substantially as you would like it, and such as Daniels could propose to the other Manufacturers with some prospect of their adopting it?

- (5) If the license agreement is substantially satisfactory, then such an agreement should be made with the

*Mr. Peter informed me  
today (6/21/16) that the  
Warwick Company, formerly  
called their film for the  
reason that the machine  
in three days would  
put off the same.*

-5-

Waterproofing Company, and orders given to start ~~with~~ the making of the machinery and provision made for the proper coating material, and at the same time, provision should be made for a room suitable for this coating operation.

G.F. Scull.

GFS/ARK.

# The National Waterproof Film Company



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(Patent applied for.)

Telephone Kedzie 694

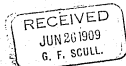
2115-2117 West Adams Street

Chicago,  
June 24th,  
1909.

Mr. Geo. F. Scull,

c/o Edison Mfg. Co.,

Orange, N. J.



My dear Mr. Scull:-

Our friends Messrs. Selig and Kleins have so far failed to call. I think the Crown Point Automobile Races are responsible for last Friday's and Saturday's neglect. I understand that Mr. S. paid for exclusive privilege of taking pictures of the race but found the Phoenix people there also. The story is out that S. then lead an assault and captured the Phoenix camera, returning it, however, after an hour or so.

I mailed yesterday a veiled reminder as per copy enclosed to both S. and K..

Our corporation is progressing as fast as possible. The first meeting will be held Monday next. Our proposition of sale will then be submitted (with inventory attached) and a day or so later formally accepted. Then will follow the resignation of the first directors after which the new election and then we shall be ready for business. Our inventory is completed. All debts are paid except Gillson's, and he has not yet furnished a bill but promised to do so this week. Machinery drawings are practically finished and two houses are now figuring on proposition of manufacture.

If you have any news which you think I ought to know I should be pleased to hear from you.

With best regards to Mr. Dyer and yourself, believe me

Yours very truly,

*W. H. Daniels*

[ENCLOSURE]

Chicago,  
June,  
23rd,

1908.

JUN 26 1908

G. F. SCULL.

Wm. H. Selig, Pres.,

Selig Polyscope Co.,

Chicago.

Dear Sir:-

Within a few days this business will be merged into a \$100,000.00 corporation. There is "no stock for sale" but nevertheless you must be interested in our proposition stands for cleaner films and any improved condition towards this end. For this reason we write to inquire if you will not release to us a day or two in advance of your regular days such films as your customers may wish waterproofed. We will call on you for the work and return it in time for your regular shipments. Our collections to be a matter between the exchanges and ourselves.

Through the kindness of the Edison Manufacturing Company and the Vitagraph Company of America this arrangement is already in force with them. We are also getting advance release from the International Projecting and Producing Company and the new Phoenix Company. Films entrusted to us will be conscientiously guarded; they will not be run or shown as we have no projecting machine nor do we propose to have.

We cordially invite you to call and if you bring a film with you we will be glad to waterproof it under your personal observation. We request that you give this matter as early consideration as possible for we wish soon to advertise the friends who grant us this advance privilege. We feel sure that you will profit through being included in the announcement.

Meanwhile we remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

PER



## The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

Telephone Kedzie 694

2115-2117 West Adams Street

Chicago,

Chicago,  
June,  
28th,  
1908.

J. A. Berst, Vice-Pres.,

Pathe Freres,

New York, N. Y.

Dear Sir:-

Answering yours of the 26th, we spread a waterproof solution over the emulsion of the film which dries as hard as the celluloid side. The film is therefore less liable to scratch, but the great advantage is that scratches which may occur can be washed out by simply reeling through a wet rag held in the hand. Hot or cold water may be used with soapuds or without. A fresh scratch shows white on the screen and detracts but little from the picture. It soon fills, however, with opaque dust and dirt and becomes a black mark across the screen, many of these producing what is called a rainy film.

We claim that if films are made washable by our process and exchanges are educated to wash them once a week or so the pictures will be free from rain as long as they are shown. We claim that the manufacturers are vitally interested in exhibiting to the public the best possible pictures and "best" necessarily means clean films. We may say here in parenthesis, that the life of a waterproof film like any other depends upon the sprocket holes, but our proposition guarantees a clean picture as long as the sprocket holes will carry it. We claim further that our preparation brightens the picture because of its highly polished finish, it being a scientific fact that light penetrates more easily a shiny surface than a dull one. We claim to do away with all tendency of sticking at the gate, also that the loop has less vibration and therefore shows a steadier picture.

If all films were waterproofed it would be a barrier to duping; while it is easy to copy a film it would be difficult to waterproof it as we control the process and machinery which spreads the solution all around the sprocket holes without clogging or going through them. This with the drying machinery would mean prohibitive outlay for the average dupe besides making him liable under our patents.

Our waterproofing is of course best applied to brand new films but on account of release day customers we have been obliged to do most of our work on old reels after cleaning them with chemicals.

We have already placed before Mr. Dyer, President of the Motion

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2115-2117 West Adams Street

Chicago,

J. A. B.--#2.

Picture Patents Company a plan by which this invention may be controlled by the Licensees of the Patents Company which would differentiate their films from all competitors. We should be glad to have you confer with Mr. Dyer regarding it as we believe he has given the subject considerable investigation. Whatever may come of this exclusive proposition later, all we ask now is that your Mr. Montagu will let us have reels in advance of his regular shipping days so that we can waterproof for such of your customers as want it, we to return them to Mr. Montagu in time for his regular shipments. Reels obtained in the morning we can return in the afternoon without delaying or discommoding him in any way.

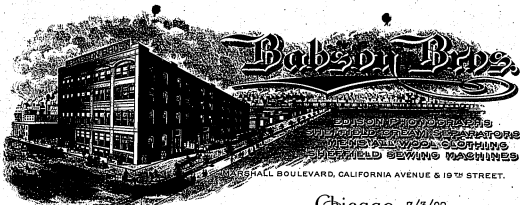
We believe this will be an accommodation to some of your customers who appreciate our process and a greater one to us for which we shall sincerely thank you.

With best wishes, we remain

Yours very truly,

NATIONAL WATERPROOF FILM CO.

PER H. A. Smith



Chicago, 7/3/09

Mr. Frank L. Dyer,  
c/o Nat'l. Phonograph Co.,  
Orange, N. J.

RECEIVED.  
JUL 6 1909  
FRANK L DYER.

Dear Mr. Dyer:

We yesterday completed the incorporation of the National Waterproof Film Co. Mr. Daniel says his requirements for the next 30 to 60 days will be in the neighborhood of \$10,000. This, as I understand it is for the building of six complete apparatuses, 12 of which are now in the process of construction; the rest is for the cost of material for doing the coating, which I understand has to be allowed to stand for some time after being mixed to get the best results.

I am going on my vacation Tuesday, July 6th, and during my absence my brothers will tend to the taking out of money and carrying out any instructions they receive from you. Will you kindly wire Tuesday how much you wish to put into the treasury at once and I will advance the amount and you can forward draft by mail. This will enable me to complete everything before leaving the city. You of course, understand that all that has been done up to the present time relative to the building of machines has been done without consulting me and I presume by your order. I shall from now on be better able to keep in touch with what is going on and no money of any size will be authorized spent without your sanction.

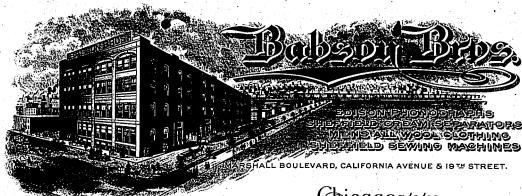
Yours truly,

BABSON BROS.

For *M. Babson*

FKH/125

PLEASE WRITE YOUR REPLY ON THE OTHER SIDE.  
WHEN WRITING ALWAYS USE YOUR CORRESPONDENCE NUMBER.



Chicago 7/8/09

RECEIVED

JUL 8 1909

FRANK L. DYER.

Mr. Frank L. Dyer,  
c/o Nat'l. Phonograph Co.,  
Orange, N.J.

Dear Mr. Dyer:

I enclose herewith copy of Escrow Agreement, also copy of Bylaws. I wish you would go over both of these carefully. I understand that the Escrow Agreement is the one you performed of the two sent down. If it is not exactly in accordance with your wishes let us know at once and we will get together and have such changes made as are necessary, also go over the Bylaws carefully and see if they are entirely satisfactory.

I have had nothing whatever to do with the drawing of these bylaws. Mr. Loesch says they were drawn exactly in accordance with Mr. Scull's instructions. So as to carry out the Escrow Agreement and to have money enough on hand until my return I advanced \$10,000 for stock which has been put in Escrow as you will note by the Escrow Agreement, but with the provision that if you considered \$10,000 more than you wished to put in at this time you can withdraw whatever amount you thought was more than necessary to use in the next month or six weeks.

I am in receipt of your telegram and presume we will have word with definite instructions from Mr. Scull in a few days, at which time we will draw out whatever part of the \$10,000 is in excess of what you think necessary. I understand from Mr. Daniels that the contracts as let will require considerable money in the next 30 to 45 days. As I will be gone I wish you would have Mr. Scull give definite instructions as to just how much money you wish to advance and my brothers can carry out your instructions.

Yours truly,

*Frederick Babson*

FKB/125

[ENCLOSURE]

RECORD OF SPECIAL MEETING  
of the Board of Directors  
of the National Waterproof Film Co.  
held at 9:25 A. M. Temple on the 3rd, day of July 1909  
at 4 o'clock P. M.

Present  
B. W. Snyder  
Ray Palmer  
C. F. Loesch  
P. W. Sullivan  
Thos. H. Stevenson  
C. F. Locust presiding.

The Secretary reports that he had caused the charter to be recorded in the Recorder's Office of Cook County, Illinois; that he had procured the seal and stock book and necessary stationery. Mr. Stevenson and Mr. Loesch submitted By-laws for the company; the by-laws appearing on pages 15 to 18 inclusive were unanimously adopted as the By-laws of this corporation.

The proposition of Mr. W.A. Daniels and Mr. F.B. Thompson which was submitted to the Board of Directors at its last meeting was then read by the Secretary and in that proposition they proposed to convey to the Company their business situated at 2115-2117 West Adams St., City of Chicago, together with all interest in all furniture and fixtures, all stationery and books all stock in trade, all machinery, cash on hand and all bills receivable, all contracts for work to be performed under the patents referred to, together with the good will of said business.

All interest in application for United States patents applied for and not allowed on any improvements on such applications which may be made in the future by either of said parties or any patents which may be applied for in the United States or Europe by either of them touching the art of waterproofing films, web coating machines, film drying machines and more particularly the application of W. A. Daniels for United States patent or a web coating machine applied for Jan. 28th, 1908, Serial No. 474916, also application for film drying machine applied for Jan. 28th, 1908, Serial No. 474795. Also an application for United States patent by F.B. Thompson for picture films applied for Sept. 1st, 1908, Serial No. 452,645, two of which mentioned applications have been allowed by the Patent Office of the United States, but upon which no patents have as yet been issued.

Also to make any and all applications for patents in foreign countries upon any and all patents for which they have made application in the United States which have been allowed on which may hereafter be allowed or be applied for by them touching the art of water proofing films or web coating machinery and to assign the same when allowed to the Company for the consideration of one thousand shares of the capital stock of the Company to be issued to them fully paid and non-assessable.

Mr. B. W. Snyder and Mr. C. F. Loesch the committee appointed by the Board of Directors, thereupon made their report showing that they have made an investigation of the business of said W. A. Daniels and F.B. Thompson and they found that the assets consisted of furniture, fixtures, stationery and books, stock in trade, machinery cash on hand and bills receivable, contracts for work to be performed under the patents to be issued, all of which were free and clear of all liability. They also reported that they had investigated the value of the earning capacity of the patents and in their judgment and belief the earnings of the patents and the water proofing process and the chemical solutions which will be protected by the patents to be issued ought to be at least \$100,000.00 per year and they recommend that the proposition of Messrs. Daniels and Thompson be accepted.

After a full discussion of the proposition and the report it was duly moved and seconded that the proposition of Messrs. Daniels and Thompson be accepted in accordance with the said proposition as herein-before set forth and that the President and the Secretary be and are hereby authorized to issue to Messrs. Daniels and Thompson a certificate of stock of one thousand shares of the capital stock of the company fully paid and non-assessable upon delivery by said Daniels and Thompson of a proper bill of sale and assignment covering a transfer by them of all their rights, interest and property as set forth in their proposition unanimously carried.

Thereupon Mr. Ray Palmer tendered his resignation as a director to take effect immediately which resignation was duly accepted on

[ENCLOSURE]

motion duly seconded and adopted. Mr. H.B. Babson was elected a Director for the unexpired term of Ray Palmer, resigned. Mr. Babson at once took his seat as one of the Directors in place of Mr. Palmer.

Thereupon Mr. Thomas H. Stevenson presented his resignation as a Director to take effect immediately which was duly accepted and Mr. Stevenson thereupon retired on motion duly seconded and adopted Mr. F.K. Babson was elected a Director to fill the unexpired term of Mr. Stevenson resigned, and he at once took the seat in the meeting.

Thereupon Mr. P.W. Sullivan tendered his resignation as a Director and Secretary of the Company to take effect immediately which was duly accepted and Mr. Sullivan thereupon retired.

On Motion duly made and seconded Mr. G. Babson was elected Director and Secretary to fill the unexpired term of Mr. P.W. Sullivan resigned, and he immediately took his seat as such Director and Secretary.

Thereupon Mr. B.W. Snyder tendered his resignation as a Director and Vice President to take effect immediately which was duly accepted and W.A. Snyder retired from the meeting. On motion duly made, seconded and adopted Mr. F.B. Thompson was elected a Director and Vice President for the unexpired term of Mr. B.W. Snyder resigned, and immediately took his seat in the meeting.

Thereupon Mr. C.F. Loesch tendered his resignation as a Director and as President and Treasurer of the Company to take effect immediately which was duly accepted and he thereupon retired. On motion duly made and seconded Mr. W.A. Daniels was elected Director and President to succeed Mr. C.F. Loesch, resigned and Mr. F.K. Babson was elected Treasurer in place of Mr. Loesch resigned, Mr. Daniels taking his seat immediately in the meeting.

On motion duly made, seconded and unanimously carried the following section was added to Article 2 of the By-laws as Section 8 of Article 2.

"In the event of the death, resignation or inability to act of either W.A. Daniels or F.B. Thompson as Director, President and Vice President, respectively the one remaining on the Board shall have the right to name the successors to be appointed in place of the one resigning or becoming incapacitated to act as Directors or officers of the Company and in the event of the death, resignation or inability to act of either of the Directors, F.K. Babson, G. Babson or H.B. Babson, the two remaining Babsons on the Board shall have the power to name the successor to fill the unexpired term of such party resigning or becoming incapacitated to act as a Director or officer of the Board."

On motion duly made and seconded the salary of Mr. W.A. Daniels as President for the present shall be at the rate of \$1300.00 per year to be paid weekly, said salary to cover not only the Presidency of the Company but all other work to be done by Mr. Daniels in connection with the Company and he shall agree to give his best efforts to advance the interest of the Company during his employment. The motion was duly put by Mr. G. Babson, Secretary and the same was carried, Mr. W.A. Daniels not voting.

Mr. Daniels thereupon stated to the meeting that he would enter the employ of the Company and to the best of his ability and efforts advance the interest of the company and that the salary as fixed was satisfactory to him.

On motion duly made and seconded the salary for the present of Mr. F.B. Thompson as Vice President shall be at the rate of \$1500.00 per year to be paid weekly; said salary to cover not only the Vice Presidency of the Company but all other work to be done by Mr. Thompson in connection with the Company and he shall agree to give his best efforts to advance the interest of the Company during his employment. The motion was put by Mr. G. Babson, Secretary and the same was carried, Mr. F.B. Thompson not voting. Mr. Thompson thereupon stated to the meeting that he would enter the employ of the Company and to the best of his ability advance the interest of the company and that the salary as fixed was satisfactory to him. Mr. Thompson offered the following resolutions.

Whereas: W.A. Daniels and F.B. Thompson are the owners of 1000 shares of the capital stock of the Company and whereas said Daniels and Thompson have entered into an agreement of June 15th, 1909 with F.K. Babson to give him an option to buy 500 shares of said capital stock at its face value from time to time, with the understanding that the money realized from said sale of stock should be used by the Company in its business and

Whereas: said Babson has agreed to immediately purchase 100 shares of said stock of \$10,000.00 the money to be turned over to the treasurer of this company and said Babson has agreed to buy the additional 400 shares of stock if more money shall be needed.

[ENCLOSURE]

Now wherefore, said Daniels and Thompson for the better protection of said Babson hereby offer to place and do place in trust with the Treasurer of said company 500 shares of the capital stock subject to the conditions of the contract existing between said Daniels and Thompson and said Babson.

Mr. Babson moved that the offer embodied by the resolution offered by Mr. Thompson be accepted and the Treasurer directed to accept said stock.

Unanimously carried.

The following resolutions was unanimously adopted.

Resolved that the funds of the Company be deposited in the Corn Exchange National Bank in the name of the National Waterproof Film Co., and that the same shall be checked out upon the signature of Frederick K. Babson, Treasurer countersigned by Walter A. Daniels President.

Percy W. Sullivan,  
Secy. for the first part of meeting.

July 7, 1909.

Fred'k K. Babson, Esq.,  
Marshall Boulevard, California Ave. & 18th St.,  
Chicago, Ill.

Dear Sir:-

Mr Dyer received yours of the 3d inst. yesterday  
and wired you as follows:-

"Not very familiar details waterproof film  
situation. Scull out of town returns tomorrow.  
My general understanding ten thousand much too  
high. "

"Will telegraph you tomorrow regarding  
waterproof film."

Mr. Dyer instructs me to write in some detail just  
what he would like to have done with this company now that  
you have control of it. You should understand that the  
whole matter is an experimental one, and that Mr. Edison  
does not wish to put any more money in the concern than is  
necessary, until the practicability of the whole scheme has  
been determined, and it is Mr. Dyer's idea that money should  
be advanced only as it is required to develop the business.

So far as we know, the only expenditures for the next  
two months while the three coating and drying machines re-



#2

Fred. K. Babson, Esq.

quired by the Edison Manufacturing Company are being built, will be the pay roll, the cost of this machinery, and possibly the cost of a certain amount of coating material, to be laid down in advance. At the time I was in Chicago, no orders were given for any machinery, and if Mr. Daniels has ordered more than three machines (the number required by the Edison Company), he is evidently doing it on the assumption that there will be at least one more licensee, although I do not know why he should think so, since no one of the Manufacturers has evinced any great interest in the matter so far.

According to Mr. Daniels, the present pay roll of the company is about \$125. per week, Mr. Daniels and Mr. Thompson each taking \$15. Now that the company is formed, they are entitled to \$30. per week, under their agreement with you, and this increase, with the \$25. a week rent that they are now paying, will bring the weekly expense to \$150. We assume that it will be at least two months before the coating machinery can be installed in the Edison Company's plant, and it will be necessary, therefore, to provide about \$1200. for the pay roll during this time. I do not know what the cost of the machinery for the Edison Company will be, but it probably will not amount to more than \$2,000.

It would not be advisable to prepare any considerable amount of coating material for the Edison Company, since it is possible that we will not use the coating com-

#3

Fred. K. Babson, Esq.

pound which the Waterproofing Company is using at the present time, this compound having a tendency to increase the inflammability of a non-inflammable film. In any event, I do not think it is desirable to provide for more than one month's supply of this material, and figuring it at a cost of \$2. a gallon, this would involve more than \$3,000. I certainly believe that none of this material should be mixed until the machines are pretty well along, and in fact, possibly, not until they begin to install them at the plant here.

You will note from the foregoing, that \$3500. would cover the probable expenditures for sixty days. If, in addition, Mr. Daniels has ordered six coating machines, instead of three for the Edison Company, this may increase the outlay another \$1500. or \$2,000. Even with this added, you will see that \$5,000. will be sufficient for the expenses of the company until September 1st, unless there is some change in the prospects, and even this amount of money would not be all required at once. You will note also that the foregoing items do not include any possible income which may be derived from the coating of films for exchanges.

Mr. Dyer's idea is that you should put in the treasury \$3,000. now and advance additional money as it may be required. In accordance with the above, I telegraphed you today as follows:-

#4

Fred. K. Babson, Esq.

"Am writing fully today. No need  
of putting in more than three thousand  
dollars now."

Mr. Dyer will probably take up the matter of  
the agreements with Mr. Edison today, and your copy will be  
forwarded to you as soon as they are signed, together with  
a draft for the \$3,000.

Yours very truly,

GFB/ARK.

Assistant to Vice-President.

[ATTACHMENT]

- LICENSE AGREEMENT-

(a) THIS AGREEMENT made this                      day of 1909, by and between the NATIONAL WATERPROOF FILM COMPANY, a corporation organized and existing under the laws of the State of Illinois, and having an office at Chicago in said State, party of the first part, (hereinafter referred to as the "Licensor"), and the EDISON MANUFACTURING COMPANY, a corporation organized and existing under the laws of the State of New Jersey, and having an office at Orange in said State, party of the second part, (hereinafter referred to as the "Licensee"): W I T N E S S E T H

(b) WHEREAS, the Licensor represents that it has developed processes and machinery for waterproofing motion picture film and owns and controls said processes and machinery, and the following named inventions and applications for Patents of the United States therefor and any United States or foreign patents which may be granted thereon:

Application of Walter A. Daniel, for  
WEB COATING MACHINES, filed January 28,  
1909, Serial No. 474,816;

Application of Fredrick B. Thompson,  
for FILM DRYING MACHINES, filed January  
28th, 1909, Serial No. 474,795;

Application of Fredrick B. Thompson,  
for PICTURE FILMS, filed September 14, 1908,  
Serial No. 452,945:

and

(c) WHEREAS, the Licensee is engaged in the manufacture and sale of motion picture films under a license from the Motion Picture Patents Company, a corporation having its principal place of business in New York City and is desirous of obtaining from the Licensor a license under the inventions and applications for patents therefor relating to the waterproofing of motion picture films which may <sup>be</sup> hereafter acquired by the Licensor.

[ATTACHMENT]

(d) NOW, THEREFORE, the parties hereto for and in consideration of the sum of One Dollar to each in hand paid by the other and of other good and valuable considerations, from each to the other moving, receipt of all of which is hereby acknowledged, have agreed as follows:-

(1) The Licensor hereby grants to the Licensee for the term and subject to the covenants, conditions and stipulations hereinafter expressed, the right and license for the United States, its territories and possessions, to use the processes and inventions referred to in Paragraph (b) hereof, and any inventions relating to the waterproofing of motion picture films which the Licensee may hereafter acquire, in coating motion picture films made by the Licensee and to sell or lease the motion picture films so coated by it. The license hereby granted is personal to the Licensee and in the event of the permanent discontinuance of retirement from business of the Licensee for a period of <sup>six</sup> consecutive months, the license hereby granted shall be immediately terminated.

(2) The Licensee hereby recognizes and admits the validity of each and every United States Letters Patent which may be obtained by the Licensor on any of the applications referred to in Paragraph (b) hereof, and of any other Letters Patent which may be obtained by the Licensor for any inventions relating to the waterproofing of motion picture films which may hereafter be obtained or acquired by the Licensor and the Licensee agrees not to contest or question the same during the continuance of this agreement.

(3) The Licensor agrees that, as soon as practicable after the date of this agreement, it will manufacture and install in the plant of the Licensee in a suitable building to be provided by the Licensee, coating and drying machines ready to be connected to a source of power to be provided by the Licensee, such machinery to be made in accordance with the latest approved plans of the

[ATTACHMENT]

Licenser and sufficient in capacity to coat all of the motion picture films made by the Licensee. The cost of manufacturing and installing such machinery and of making all reasonable repairs thereto or <sup>reasonable</sup> replacement of worn parts thereof, shall be paid for by the Licenser and such machinery shall at all times remain the property of the Licenser. Any motor or other source of power for such machinery shall be installed and paid for by the Licensee. The Licenser further agrees to instruct the employees of the Licensee in the proper methods of handling and using such machinery and in working the processes owned by it for the coating of films, and the Licenser further agrees to attach to each of its coating machines a suitable counter to measure the number of running feet of film coated on such machines. Such counter shall be provided with a cover over the dials thereof, and a lock for such cover, and the key to such lock shall be placed in the possession of the Licensee and no officer or agent of the Licenser shall have the right of access to such dials, and the Licensee agrees that such counter and its connection with said coating machine shall not be disturbed, displaced or tampered with in any way.

(4) The Licensee covenants and agrees, during the existence of this agreement, to coat all motion picture films placed on the market by it on such machinery installed by the Licenser and to pay to the Licenser quarterly, within fifteen (15) days after the first days of January, April, July and October, royalties at the rate of two (2) mills per running foot on all films coated by it during the preceding quarter. The amount of such films so coated shall be determined by the counter or counters attached to the machinery installed by the Licenser and the reading of the counter or counters at the end of each quarter shall be done by a certified accountant who shall be agreed upon by the parties hereto, and who alone, in addition to the Licensee, shall have a right to read such counter or counters. The said certified accountant shall

[ATTACHMENT]

render a statement at the end of each quarter to the Licensee of the amount of film which he finds to have been coated by the Licensee during that quarter, and the Licensee shall make payments of royalties due therefor to the said accountant within fifteen days after the rendition of said statement. The said accountant shall then report to the Licensor the gross amount of royalties collected by him from the Licensee and any other licensees of the Licensor, who may at that time be licensed to use the Licensor's processes and machinery for the coating of films, and the certified accountant shall not reveal in any manner, either directly or indirectly, to the Licensor, or any other of the said licensees, the amount of film coated by the Licensee.

(5) The Licensor further covenants and agrees to keep said machinery in good repair and to aid by its expert advice in overcoming any difficulties which the Licensee may experience from time to time in the coating of its films, and the Licensee covenants and agrees that the employees of the Licensor may have access to the said machinery at all reasonable times for the purpose of inspection and repair.

*As per contract  
2-22-36, etc.* { (6) The Licensee further covenants and agrees to use in the coating of its films only the coating compound supplied by and purchased from the Licensor, and the Licensor agrees to furnish such coating compound prepared according to its latest and best formulae at a price not to exceed \$4.00 per gallon.

(7) The Licensor further covenants and agrees that it will not, without the consent of the Licensee, grant licenses for the use of its machinery and processes on more favorable terms than those provided in this agreement.

(8) The Licensor further covenants and agrees to use its best endeavors to make license agreements similar to this agreement with each and every manufacturer and importer of motion pic-

[ATTACHMENT]

*stet* tures licensed by the said Motion Picture Patents Company, and further agrees not to so license any manufacturer or importer of motion pictures who or which is not licensed by the said Motion Picture Patents Company, provided that ~~these~~ <sup>five</sup> such licensees of the said Motion Picture Patents Company, including the present Licensee, shall enter into agreements with it, similar to the present agreement. If, however, <sup>at any time</sup> after one year after the date of this agreement, the Licensor has not ~~in force~~ license agreements with at least ~~three~~ <sup>five</sup> of the licensees of the Motion Picture Patents Company, it shall be at liberty to enter into agreements for the coating of films with other manufacturers and importers of motion pictures. The Licensor further agrees not to coat films for any exchange not licensed by the Motion Picture Patents Company while and so long as it has existing license agreements with at least ~~three~~ <sup>five</sup> manufacturers or importers licensed by the Motion Picture Patents Company.

(9) It is mutually covenanted and agreed by and between the Licensor and the Licensee that unless sooner terminated as hereinbefore or hereinafter provided, this agreement and the license granted thereby, shall take effect on the date hereof and shall continue until June 20th, 1910, but that the Licensee may renew this agreement and license thereafter from year to year on the same terms, conditions and stipulations, as hereinafter provided, by giving notice to the Licensor on or before the 20th day of March in each year, beginning with the year 1910, of the Licensee's election to so renew this agreement, provided, however, that no royalties for the coating of film shall be paid by the Licensee until the said machinery shall have been completely installed by the Licensor in the plant of the Licensee, and the employees of the Licensee have been suitably instructed by the Licensor as to the coating of such films. This period of instruction shall not, however, exceed fourteen (14) days after the com-



[ATTACHMENT]

plete installation of the said machinery.

fee paid 1/15  
(10) It is further mutually covenanted and agreed by and between the Licensor and the Licensee that if the processes and machinery for coating film under which this license is granted, proves, after 90 days' use by the Licensee, to be so unsuitable for the purposes for which they are intended as to make the further use thereof by the Licensee undesirable commercially, then the Licensee shall have the right to terminate this license and agreement on thirty (30) days written notice to the Licensor, such notice to be given at the end of the said 90 days. The Licensee shall also have the right after ninety (90) days use, to terminate this agreement on thirty (30) days' written notice, (such notice to be given at the end of the said ninety (90) days) in the event of the invention or discovery by others, of processes and machinery for coating films which do not embody any of the inventions owned by the Licensor, which produces a product so much superior to or cheaper than the product produced by the processes and machinery of the Licensor as to make it commercially impracticable for the Licensee to continue to coat its films by the processes and machinery of the Licensor. If, however, after notice of such proposed cancellation for either of the foregoing causes, the Licensor believes that the Licensee has unfairly or unjustly arrived at its conclusion in regard to the processes and machinery of the Licensor, or of the advantages of any new processes or machinery, then the matter in dispute shall be submitted to three arbitrators, one each to be selected by the Licensor and the Licensee respectively, and these two to select the third, and the Licensor and Licensee agree to abide by the decision of a majority this board of arbitrators.

(11) It is further mutually covenanted and agreed by and between the Licensor and Licensee, that if, during said original term or during any such renewal period, either party should, knowingly or through gross neglect or carelessness, be guilty of a breach,

[ATTACHMENT]

violation or non-performance of its covenants, conditions and stipulations, resulting in substantial injury to the other party, and should, for the period of forty (40) days after notice thereof from the other party persist therein or fail to correct, repair or remedy the same then and in such case the party aggrieved may terminate this agreement by giving notice in writing to the guilty party of its intention so to do. It is, however, mutually covenanted and agreed by and between the Licensor and Licensee that if the guilty party should correct, repair or remedy such breach, violation or non-performance of its covenants, conditions and stipulations within the said period of forty (40) days after such notice, and should thereafter knowingly or through gross neglect or carelessness be guilty of a second breach, violation or non-performance of its covenants, conditions and stipulations, resulting in substantial injury to the other party, then, and in such case, the party aggrieved may terminate this agreement by giving thirty (30) days notice in writing to the guilty party of its intention so to do. Such termination of the agreement, however, shall not prejudice either party hereto in the recovery of damages because of any such breach, violation or non-performance by the other party hereto.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed by their officers duly authorized to perform these acts the day and year first above written.

NATIONAL WATERPROOF FILM COMPANY  
By

\_\_\_\_\_  
President.

EDISON MANUFACTURING COMPANY  
By

\_\_\_\_\_  
Vice-President.

[ATTACHMENT]

*Revised ver* (paragraph 10)

The Licensee covenants and agrees to coat all the films marketed by it after the installation of the machinery of the Licensor, by such machinery, and according to the processes of the Licensor for a period of at least ninety (90) days. It is further agreed by and between the Licensor and the Licensee that at any time after the end of such ninety days, the Licensee may give thirty days written notice of its intention to terminate this agreement if it should decide that the product, ~~xxx~~ processes and machinery of the Licensor are so ~~xx~~ unsuitable for the purposes for which they are intended as to make the further use thereof by the Licensee undesirable commercially, or, if it should develop that the inventions owned by the Licensor are not so broad and novel as to prevent the ~~manufacture~~ <sup>7</sup> ~~xxxxxx~~ and use by others of the same, or substantially the same, product, processes and machinery without infringement of the patent rights of the Licensor or of others, or if the further use by the Licensee of the inventions owned by the Licensor should become commercially impracticable by reason of the invention or discovery by others of processes and machinery for coating films, which ~~do~~ <sup>do</sup> not embody any of the inventions owned by the Licensor, and which processes and machinery produce a product ~~superior~~ superior to, or cheaper than, the product produced by the processes and machinery of the Licensor. At the end of the said thirty days, this agreement and the license granted thereby shall be deemed to be terminated by the Licensor and the Licensee,

[ATTACHMENT]

✓ unless the Licensor notifies the licensee within that  
period of its desire to submit <sup>to arbitration</sup> the question whether or  
not the Licensee <sup>has</sup> ~~has~~ unfairly or unjustly arrived at its  
conclusion in regard to the product, processes and ma-  
chinery of the Licensor, or of the patent rights of the  
Licensor or of the advantages of any new processes or  
machinery, in which case the matter in dispute shall be  
submitted as soon as possible to three arbitrators, one  
each to be selected by the Licensor and Licensee respec-  
tively, and these two to select the third, and the Licen-  
sor and Licensee agree to abide by the decision of the  
majority of this Board of arbitrators.

July 12, 1909.

Messrs. Gilson & Gilson,  
Monadnock Building,  
Chicago, Ill.

Gentlemen:-

Yours of the 9th inst. addressed to Mr. Dyer has been received. Mr. Dyer has ~~just~~ returned from Europe and will not return until the middle of September. His opinion in regard to the foreign applications is that an application in each of the three countries covering simply the article will be sufficient, the practical impossibility of enforcing any patents on the machines causing him to believe that no advantage could be derived from any further expense in connection with such application. I feel justified, therefore, in saying that Mr. Dyer would be willing only to stand the expense in connection with an article application.

If Mr. Daniels believes that foreign applications on the machinery should be taken out, he, of course, may do so at his own expense, and he may be willing to do it, since his interests in the Company will always be at least 50%, and at the present time are considerably more than that. It is wholly immaterial, as I see it, what disposi-

#2

Messrs. Gillson & Gillson.

tion he should make of these foreign patents, since licenses to use them would in no case give the right to import the product into this country, and the Waterproofing Film Company is interested only in this country. Of course, when the foreign article applications are filed, they should be broadened, as pointed out in previous correspondence in relation to the United States case.

Yours very truly,

GFS/ARK.

Assistant to Vice-President

7416

July 12, 1909.

Mr. Walter A. Daniels,  
2215 West Adams Street,  
Chicago, Ill.

Dear Sir:-

Mr. Dyer has gone abroad, and will not return until the middle of September. Before he went, he signed the enclosed license agreement, which I send you for your inspection and criticism. Any minor corrections can be made in it. I call your attention particularly to Paragraph 10, which is substantially the same as the corresponding paragraph in the agreement drawn up while I was in Chicago. I believe that you will appreciate that all of the conditions set forth in this paragraph will be necessary if you attempt to approach the other Licensed Manufacturers.

If you will return this copy with your approval, or criticisms, I will have both copies executed, and will return one for your files. If the agreement is satisfactory, it might be well for you to execute this copy and it will then be necessary for me to send only the remaining copy to you.

Mr. Dyer before he left, objected to placing as

#2

Mr. Walter A. Daniels.

much as \$10,000. in the treasury at the present time. He has corresponded with Mr. Babson in regard to this company, but authorized Mr. Babson to put in as much more than \$3,000. as the same shall be needed. I infer from Mr. Babson's letter that you are proceeding with the manufacture of air coating and drying machines. Since the Edison Company requires only three of such machines, I presume that you are building the other three in anticipation of a possible agreement with another manufacturer. I should be pleased to know what you find the expense of building these machines will be.

A strip of film 100 feet long is being sent you under separate cover today. This film is of the non-inflammable variety and I should like to have you coat 50 feet of it only, keeping the other 50 feet in the same room, and returning it in the same package. Our experimenter here has discovered that apparently the waterproofing both strengthens this non-inflammable film and preserves it from deterioration, and we wish to ascertain whether or not this is the case, and for that reason we are sending this film in such a way that there would be absolutely no difference in treatment or handling of the two sections other than by waterproofing.

Yours very truly,

GFB/ARK.

Assistant to Vice-President.



## The National Waterproof Film Company



Telephone Kedzie 694

The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

2115-2117 West Adams Street

JUL 13 1909  
G. F. SCULL.

Chicago, July 15th, 1909

Mr. Geo. F. Scull,

c/o Edison Mfg. Co.,

Orange, N. J.

Dear Mr. Scull:-

The registered package of noninflammable film reached us this morning. We coated half of it as you requested. We did not separate this at all as we ran it all through the machine under the same atmospheric conditions; we did this so that you would be sure that no change could be made in it. There is a little white thread tied in the sprocket hole in the center of the film which will show you where our coating starts.

We tried some noninflammable film coated with our present solution before the lamp on a projecting machine with a very sharp focused condenser; we could readily burn holes through both the coated and uncoated alike but failed to be able to start a flame. While your experimenter is trying other experiments have him test this out to find out the difference with regard to its inflammability.

We received contract and will take same up tomorrow. In the mean time we are going ahead with your machines and hope to be down there with them the first of the month. We are building five machines but the first three will be shipped to you.

Kindly let us know the results of this film, meanwhile remaining

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

PER

*J. M. Thompson*

# The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

2115-2117 West Adams Street

Telephone Kedzie 694

RECEIVED  
JUL 18 1909  
G. F. SCULL

Chicago, July 17th, 1909.

G. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

Answering yours of the 12th: Relying upon your judgment we shall make no changes in the license agreement. Send the copy and we will sign and return at once.

Regarding money deposited by Mr. Babson, inasmuch as stock has been issued and put in escrow for the original amount (\$10,000), and as he has since withdrawn \$7,000 of it we conclude the best way to treat the withdrawal is as a loan to him; subsequent sums which he may deposit being credited against the account.

It is certain that by the plan of leasing machinery we shall need the original amount and more.

Until today, when I drew \$250.00 for July rent and pay roll of the 17th, we have been going upon the money which Thompson and Daniels turned over with the business-We still have about \$120.00 left in petty cash.

We are building five sets of machinery as we found it more economical than to get just the three sets for the Edison Manufacturing Company. The contract price is \$1830.00 to which must be added the following items:-

Tables for 5 coaters-----	\$ 35.00
Counters for ten coaters-----	250.00
Brushes for 5 coaters-----	35.00
Sprockets Wheels for five coaters, estimate-----	15.00
Tape for 10 drying machines-----	275.00
Heaters for 10 drying machines-----	200.00
Pads for 7 sixing machines, estimate-----	17.00
Belting, wire and turn buckles three machines, estimate-----	35.00
Air generator and tank-----	150.00

TOTAL \$2843.00

Explaining the counters, heaters and tape for ten machines we found it much cheaper than to buy smaller lots. The excess can be utilized on subsequent machines we shall need.

We have today a bill from Gillson & Gillson as per copies enclosed

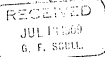
# The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

Telephone Kedzie 694

2115-2117 West Adams Street



G. F. S.--#2.

Chicago,

amounting to \$145.00. We have sundry other bills which must be paid amounting to \$105.33, so with no calculation for other expense it is evident that Mr. Babson should make another deposit early next month when machinery is completed.

Assignments of patents to company were drawn by Mr. Gillson, signed and sent to Washington today. We will be governed by your advice to him regarding foreign patents applying at once for one only in England, France, and Germany. By the way we have received another application for right of use in England.

Delay in starting the manufacture of machines was occasioned by changes in them, requiring complete new drawings; these were made by a draughtsman who for several weeks increased our pay rolls \$35.00. Now that he is gone our expense is \$5.00 per week less notwithstanding increases for President and Vice-President. The former has been away camping for eleven days but is now prepared for vigorous work. I want to close up licenses with at least five of the manufacturers before Mr. Dyer returns. I believe it can be done; shall begin with Mr. Spoor and then go East leaving other Chicago manufacturers for after consideration.

Before Mr. F. K. Babson went away he signed a number of blank checks leaving them with his brother G. who seems to think that he is to be custodian and that our bills should be taken to him and checks drawn in his office. This will be very inconvenient for us and unless you have some very good reason for doing otherwise I wish you would gently hint to him that we need the check book where the book-keeping is done at 2115-W. Adams St. So far new company accounts have been kept on slips but an expert is engaged to open new books tomorrow and I shall put in the day with him.

Taking advantage of the photographers excursion rates Mr. Thompson will tomorrow night go to Rochester. He hopes to learn more about non-inflammable film and possibly to arrange for obtaining from the Eastman Company acetate-cellulose as a new base for waterproofing this kind of film. Although all projecting machine tests which we have made with our present coating on non-inflammable film does not appear to add to its inflammability we believe it wise to be prepared for changing it later on it should appear desirable. Mr. Thompson will be well introduced by the Bausch & Lomb people whose relations with the Eastman Company are very close.

With best wishes, we remain

NATIONAL WATERPROOF FILM COMPANY

PER

*W. A. Daniel*  
P.D.

ENCL.

July 24, 1909.

W.A. Daniels, Esq.,  
c/o National Waterproof Film Co.,  
2115 West Adams Street,  
Chicago, Ill.

Dear Sir:-

Your letters of the 17th and 22 insts. together with Mr. Thompson's letter of the 15th, have been received by me on my return from out of town.

The non-inflammable film which you coated for us recently has also been received, and tested, and so far as I can make out from a telephone conversation with our experimenter, we find that the waterproofing does not materially improve the film, so far as its strength is concerned.

Mr. Thompson refers to testing the film for inflammability in a projecting machine. I believe that this is not the true test, since at the present time all projecting machines are arranged with safety shutters, which absolutely prevent the light of the lamp being focused on the film. The recent fire at the American Film Exchange in Chicago shows that the real danger is in the ignition of the film directly, and I must say that from the same we have had that the waterproof

#2

Mr. W.A. Dahils.

coating does slightly increase the inflammability. I am glad to know that Mr. Thompson is going to Rochester and I hope that he will be able to get on the track of the non-inflammable coating.

I understand that some concerns are dissolving the non-inflammable films in acetone to form a cement, and it is possible that such a solution would form a suitable coating.

I enclose a second copy of the contract. Your statement of costs and machinery is very interesting. In this connection I wish that you would send me a plan of the coating machines, so that I can look after the preparation of a room here for them. All that I would need would be an outline showing the length, breadth and height. If you have not made a complete assembly drawing of the machines, a mere statement of these three dimensions will probably be sufficient. I should also like to know about what time you expect to be ready to install them here.

The withdrawal of the money by Mr. Babson was with the distinct understanding that he would re-deposit it from time to time as the business requires it, and I think there will be no difficulty in that respect. So far as the payment of bills during the absence of Mr. F.K. Babson is concerned, I would prefer not to interfere, because he must be returning from his vacation very shortly, since he left on July 6th,

#3

Mr. W.A. Daniels.

and he thoroughly understands, I think, that his money is to be deposited to the credit of the company and drawn on accordingly.

The bill of Messrs. Gillson & Gillson is satisfactory and it would seem that the patent on the Web coating machine, as well as on the Drying machine, can be permitted to issue.

Yours very truly,

GFB/ARK.

Assistant to Vice-President.

## The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

2115-2117 West Adams Street

Telephone Kedzie 694

Chicago, July 27th, 1909

G. F. Scull, Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. Y.

RECEIVED

JUL 29 1909

G. F. SCULL.

Dear Sir:-

We are in receipt of yours of the 24th with stated enclosure which is duly signed and returned herewith.

Sorry to hear that our coating adds no strength to the M.-I. film, for we hear this film lacks considerably in this particular. From enclosed copy of our weekly trade letter you may gather our views as to inflammability of a waterproof film. It seems to us that the greatest fire danger is in theatres and that with proper care fires like that of the recent American Film Service could be prevented. However, as we wrote you before we are looking for improvement. To this end we want to find a source of supply of acetate cellulose, the base of M.-I. film. Mr. Thompson's trip East was to learn if the Eastman people would sell to us but through the earnest advice of his friends in the Bausch & Lomb Company he did not make his wants known. The writer is inclined to believe that if we get this material from Eastman it will be only through your influence.

Another chemical which will materially reduce the inflammability of our present solution is Amylic or any other derivative of silicic acid. Silicate, commonly known as "water glass" is easily obtained but this will not do. The other is not on the market. Could not your chemist make us a couple of pounds or enough for our experiments and sufficient to learn its approximate cost in quantities. We should never be able to supply our wants by dissolving old M.-I. films.

Do you ever see the "Kinematograph", a London trade paper? If so kindly read the second column page 498 of the July 15th number.

Mr. Spoor has been so busy rebuilding his office that I have not been able to see him, but hope to do so tomorrow. I did see Mr. Selig a few days ago and found him very frank in saying that he can and will waterproof regardless of our patents. He claims to have done this ten years ago, as an experiment presumably, without making it a commercial proposition. He says that he has machinery to do it and that he is ready to fight any rights given us by Uncle Sam. Notwithstanding all his bluster I think we are closer to him than before I called. By the way, he apologized for not keeping the promise given you to call on us, saying "that it was on the advice of his attorney that he kept away".

## The National Waterproof Film Company



Telephone Kedzie 694

The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

2115-2117 West Adams Street

Chicago,

G. F. S.--#2.

The floor space required for table with conter and dryer in line is 21 feet 3 1/2 inches in length and three feet in width. To this should be added such space as you need for getting around the machine. The height is 10 feet and 2 inches.

We are going to be delayed on counting machines and heaters so that instead of being ready early next month it is my belief that it will be well on towards the end of August before your machinery will be installed.

We have arranged a system of vouchers in duplicate so that Mr. Babson can retain one copy from which he can keep accurate calculation of money paid out. The original voucher goes to the creditor for his receipt. Each voucher will correspond in number with the number of check which pays the account.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*H. A. Daniel*  
Pres.

WAD/LD

P. S. Had a very pleasant interview today with Mr. Spoor and have left contract with him to look over. Anticipate very little trouble in getting his signature. He also tells me that Mr. Selig will come around all right in time. Says he is always on the off side at the start of anything.



# The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

2115-2117 West Adams Street

Telephone Kedzie 694

Chicago, July 31st, 1909

Mr. G. F. Scull,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir. -

Replying to yours of the 29th will have to go down to Babson before I can return your contract with seal of company. This I will do Monday. I noticed that the other contract sent you with Mr. Dyer's signature did not have the seal of your company, but thought I would present it to you for this purpose on my next visit East.

of  
I have seen Mr. Spoor and he has taken copy of contract to look over. I expect to see him Tuesday next and get him to sign. For this reason I do not return our contract as Mr. S. might wish to see that the copy furnished him is just like the one furnished Mr. Dyer. The matter, however, will have our earliest attention.

Our representative Mr. Beadell, was in Detroit yesterday where the Pacific Coast Borax Company were giving one of their shows. He met the chief operator, Mr. Merollo, and received the enclosed letter from him. You will note the date is a little in advance, but this was done purposely so as to bring up the 1250 times mentioned. It seems to us as a pretty good letter.

I changed my mind on sending out this week the letter regarding the non-inflammability of our coating and sent out instead one like the enclosed.

We are told that we can obtain Amylic Silica from Messrs. Merck & Company, University Place & 8th St., New York City. We wrote them yesterday ordering two (2) pounds. We also find that Acetate Cellulose is manufactured by a German firm whose address we are now endeavoring to obtain. In the mean time by our own experiments we have been able to make an absolutely fire proof coating but of not sufficient clearness for our purpose. We believe that if we can succeed in clarifying it in some way we have got the best thing yet.

With best wishes, we remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniel*  
PRES.

August 4, 1909.

W.A. Daniels, Esq.,  
2115 West Adams Street,  
Chicago, Ill.

Dear Sir:-

Yours of the 2nd inst. enclosing contract has been received.

In view of the statement in yours of the 31st ult. in regard to the amylac silica, I have not taken up the matter with our chemist.

Some time since you suggested the possibility of using our mailing list in sending out circulars in regard to the waterproof film. I would, of course, be very glad to obtain this for you, but I believe that it might involve difficulties in the way of making it apparent that there is some connection between the two companies, and also, I believe that the education of the exhibitors will be brought about as soon as we are ready to begin waterproofing, through matter which we will insert in a new publication which the company is getting out, copy of which I enclose, and which is devoted to the interests of the Edison Company exclusively. Naturally in this paper which is being sent to every exhibitor in the country, waterproof films will

#2

W.A. Daniels.

be boomed.

Yours very truly,

GFS/ARK.  
Enc.

Assistant to Vice-President.

# The National Waterproof Film Company



The life of moving picture films indefinitely extended.  
Process prevents rubbing, scratches and wear.  
(Patent applied for.)

2115-2117 West Adams Street

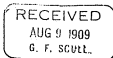
Telephone Kedzie 694

Chicago, Aug. 6th, 1909.

G. F. Soull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.



Dear Sir:-

We are in receipt of your favor of the 4th and note that you have not taken up the matter of Amylic Silica with your chemist. We find this a very difficult chemical to procure and up to this time have been unable to get it. We have one chemist in Chicago that wants to charge us \$300.00 for a formula, besides which he wants us to pay for his experiments so that the cost is an unknown quantity and we are not at all inclined to patronize him. In the mean time we are in correspondence with several manufacturing chemists through which we hope to receive results.

Mr. Thompson has succeeded in making a film which is more fireproof than the new N.-I. film; it is impossible to ignite it. It has every requisite for our coating except the one important one of being clear. If Thompson can find some way of clearing it we will have a very nice coating.

Note what you say about the mailing list of theatres and are willing to accept your judgment in the matter. We certainly do not wish to increase our expenses by prematurely circularizing the theatres. We find the postage on the circular letters to the exchanges is quite an item.

We want to congratulate you on the get-up of the "Kinetogram". It is very nicely printed and we like the idea of the colored head lines.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. H. Daniels* Pres.

Aug. 18, 1909.

Mr. W. A. Daniels,

National Waterproof Film Co.,

2115 W. Adams St., Chicago, Ill.

Dear Sir:

In response to yours of the 16th inst., I have requested the Film Department to forward you 200 feet of film on non-inflammable stock. This will be sent you free of charge.

Yours very truly,

GFS/IWW

Assistant to Vice-President.

Orange, N. J., August 20, 1909.

Edison Manufacturing Co.,

Orange, N. J.

Gentlemen:

At an informal meeting of the Eastern manufacturers at the Patents Company's office on the 17th inst. attention was directed to the fact that some manufacturers are arranging to give away posters free of charge. It was agreed that this practice would eventually lead to each manufacturer being obliged to do the same thing, at a considerable loss, and that it really constitutes a reduction in the price of film. This practice is also directly contrary to that provision of the manufacturer's license in which the licensee agrees not to present or donate other goods or merchandise or prizes to induce the lease of positive motion pictures (Paragraph 16).

The manufacturers present requested the Patents Company to send out a notice to the manufacturers directing that no posters or other goods be given away by them either to exhibitors or exchanges.

Yours very truly,

GFS/IWW

Secretary.

EDISON MANUFACTURING COMPANY.

Aug. 20, 1909.

W. A. Daniels, Esq.,

National Waterproof Film Co.,

2115 W. Adams St., Chicago, Ill.

Dear Mr. Daniels:

I had a conversation with our chemist here yesterday in regard to amyl or amylic silica or silicate. He has apparently never seen this substance, but from his reading he assured me that in his opinion the substance would be unstable, breaking down into silica, and, moreover, he seemed to have grave doubts as to whether or not it would be non-inflammable. He suggested that it might be possible for him to make up some of the substance, but in view of his statements, it seems that this would be unnecessary, since such a compound would apparently be unfit for your use.

Yours very truly,

GFS/IWW

Assistant to Vice-President.

OFFICERS:  
W. DANIELS, President,  
F. B. THOMPSON, Vice-Pres.,  
D. BARBER, Secretary,  
F. C. BARBER, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.  
218-219 WEST ADAMS ST.  
CHICAGO.

TELEPHONE HEDDIE 689.

Aug. 20th, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. J.

RECEIVED

AUG 23 1909

G. F. SCULL

Dear Sir:-

We are in receipt of your favor of the 18th and must certainly thank you for sending us the 200 feet of H.-I. stock free of charge.

Three of the five dryers ordered have been delivered this morning. The coaters are not yet ready because of delay in getting counting machines. The dryers will be set up and tested before shipping.

I've made very good progress with Mr. Spoor, but have not yet succeeded in getting his signature. We coated a reel for him yesterday which he is to send to his brother in Europe and if it meets with his favor the idea is to coat all of his European stock in our plant here for the present. He is also going to have us coat a negative for him and this will be ready tomorrow or Monday. We believe that the coating will be of great advantage to a negative, keeping it clean, protecting the high lights, and because of its shiny surface will make better prints. At any rate this negative will prove whether we are right or wrong. If I can finish with Mr. Spoor by Tuesday I think I shall be in New York by the last of the week.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. Daniels*  
Pres.

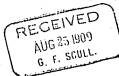




## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER  
PROCESS AND MACHINERY PATENTS PENDING  
1830-1832 WEST ADAMS ST.  
218-217 WEST ADAMS ST.  
CHICAGO.

TELEPHONE REDDICK 8.



Aug. 23rd, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,  
Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

We are in receipt of your favor of the 20th and note what you say about Amylic Silica. We have abandoned trying to get this chemical which we are told does not exist and cannot be made. We are working on other lines and think we are now on the right track. We want to thank you for your trouble in the matter, however.

We have just sent in patent application for waterproofing films by applying a thin coating over the entire surface and then a heavier coat between the sprocket apertures.

Two of the five machines orders have been delivered and are being set up; the other three are promised this week. We are also promised three of the counting machines to be here today or Wednesday.

I am sorry to report that I have not yet succeeded in landing Mr. Spoor, but we are daily getting closer to it. I think I advised you before that we had coated a reel as a sample for his brother in England and if it meets with his approval all films which Spoor sells in that country will go over waterproofed. We also coated a negative for him Saturday which has not yet been reported on. We believe that a coated negative will make a better print and shall watch the result of this one with considerable interest. Mr. Miller of Spoor's place called on us this morning and brought a short piece of new film which he wishes waterproofed for some experiments of his own which

OFFICERS:  
W.A. DAVIES, President,  
F.B. THOMPSON, Vice-Pres.,  
G. SAMPSON, Secretary,  
E. SAMPSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4820-4822 WEST ADAMS ST.  
818-8117 WEST ADAMS ST.

CHICAGO.

TELEPHONE REDDIE 600.

G. F. S.--#2.

he wishes to make. Mr. Miller, and in fact all the people connected with Spoor's place, are very favorable to our proposition and I hope that this week will enable us to close a lease.

We have 26 old reels to clean and coat in the house this morning.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davies*  
Pres.



## NATIONAL WATERPROOF FILM CO.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4230-4232 WEST ADAMS ST.  
212-217 WEST ADAMS ST.

CHICAGO.

TELEPHONE HEDDIE 634.

Sept. 4th, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

RECEIVED  
SEP 7 1909  
G. F. SCULL

Dear Sir:-

We have today ordered from the Chicago Pneumatic Tool Co. shipment of one 4x4 belt driven granite compressor having single acting air cylinder 4 inches in diameter by 4 inch stroke of piston, etc. Also one air receiving tank 5x18. As it usually takes a week before shipment we figure that these two articles will reach Orange about the time of the other machinery to be shipped from Chicago. In this connection we wish to say that we have been most horribly delayed in this matter but indications are now that we shall be able to ship by Monday or Tuesday week. We have ten barrels of solution aging and would ask how many of these you would suggest shipping to Orange. Each tank contains 50 gallons and one gallon will do four thousand feet.

The writer will be in New York Tuesday of the coming week at the Knickerbocker Hotel and should be pleased to meet you at any time that it will be convenient (day or night).

With best wishes, we remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels*  
Pres.

P. S. Shipment addressed National Waterproof Film Company, c/o Edison Mfg. Co., Film Department, Orange, N. J.

TELEPHONE MEDIC694.

OFFICERS:  
W. A. DAVIS, President  
E. A. THOMPSON, Vice-Pres.  
G. F. SCULL, Secretary  
J. C. HARRIS, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
1000-1002 WEST ADAMS ST.  
318-317 WEST ADAMS ST.

CHICAGO.

RECEIVED  
SEP 15 1909  
G. F. SCULL

Sept. 13th, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

I returned yesterday, succeeded while in the East in introducing the waterproofing proposition to the Vitagraph Company who will tomorrow put into their regular service a new film, about 650 feet of which has been waterproofed, and 350 feet not. The waterproofed section was furnished through the Chicago office of the Vitagraph Company and we are glad to say was run by them before we got it. We say this because it was scratched to some extent before we received it. Mr. John Rock promised to advise his father of this condition.

In the Vitagraph office I met Mr. Clark of the Pittsburg Calcium Light & Film Company for whom we have waterproofed a few reels. He gave Mr. Rock a very good report of our work.

I saw Mr. Long of the Kalem Co. twice and left duplicate contracts for him to sign upon the return of Mr. Marion (September 20th). However, I may have to see them both together on my next trip (in about a month).

Saw Mr. Singhi of S. Lubin in Philadelphia and got two reels from him, one new and one old. These will be waterproofed and reshipped today for his examination and experiments.

Saw Mr. Kennedy of the Biograph Company Saturday at 52 Broadway and was much impressed with his views of the film situation. He seems favorably inclined to our proposition, but was quite solicitous for Mr. Geo. Kline who had no manufacturing plant. I told him we could probably arrange to coat Mr. Kline's films in our factory so that it would not cost him much more than the others. Here is a situation I want to talk with you on when I see you again. Mr. Kline is due in New York this week and Mr. Kennedy is to take up the matter with him. Left two contracts for Mr. Kennedy to read and sign.

Mr. Spear reports favorably on the coated negative, admitting that the print from it is clearer out and shows finer detail than from ordinary negatives. Part of the print was from ordinary negative and part from waterproofed, and it is said the difference was very apparent; I have not seen it.

Mr. Selig is still away but is expected home October 15th. Mr. Berst

OFFICES:  
W. A. DAVIS, President,  
P. B. THOMPSON, V. Pres.,  
C. E. BROWN, Secretary,  
J. E. BROWN, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4300-4302 WEST ADAMS ST.  
BIR-817 WEST ADAMS ST.

CHICAGO.

Mr. G. F. S.--#2.

of Pathe Freres is to be in Chicago the latter part of this month and I hope to get him sufficiently interested to at least take a ride out to our plant.

Most of your machinery is boxed and will be shipped some day this week. We have two surplus sets of machines at the machine shop which will probably be completed this week. As it takes so long to build them I am inclined to order another five sets from the present outlook of probable need. What is your advice on this?

It may interest you to know that our city man, Mr. Beadell found here a place that furnishes N.-I. titles to independents and learned that the stock came from Eastman, all of which he reported to Mr. John Rock, who I think intends notifying the M. F. P. Co. in due course.

I believe my trip was opportune and will result in great good, paving the way for closing up a number of contracts on next call.

I was glad for the few minutes conversation with you, and hope to see you again before long. Please remember me to Mr. Dyer and say that I regret not having an opportunity to welcome him back to the "land of the free".

With best wishes, I remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis*  
Pres.



## NATIONAL WATERPROOF FILM CO.

Moving Picture Films Made Washable with Water

PROCESS AND MACHINERY PATENTS PENDING

4300-4302 WEST ADAMS ST.  
217-217 WEST ADAMS ST.

CHICAGO.

TELEPHONE KEDDIE 89.

Sept. 18th, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

RECEIVED

SEP 20 1909

G. F. SCULL

RECEIVED

SEP 20 1909

G. F. SCULL

Dear Sir:-

We are shipping today three sets of machinery as per enclosed invoices. Mr. Thompson will be in Orange by the time this machinery arrives to superintend the installation and teach your people how to run it. We are also shipping in the same car four tanks of solution.

Hoping that the shipment will reach you without mishap, we remain

Yours very truly,

NATIONAL WATERPROOF FILM CO.

*H. Daniels* Pres.



TELEPHONE KEDZEE 884

Chicago, Sept. 18th, 1909. 19

Edison Mfg. Co.,

Orange, N. J.

## To National Waterproof Film Company Inc

4200-4202 West Adams Street

TERMS: NET CASH

28 Cases comprising 3 sets of machinery, each set consisting of 1 coating machine, 1 drying machine, and 1 sizing machine, at \$1000.00 per set

\$3000 00

Dryers Nos. 10, 11 and 12.

Coaters Nos. 10, 11 and 13

Sizers no numbers.

Shipped via Pennsylvania Railroad.

Marked National Waterproof Film Co.,

c/o Edison Mfg. Co., Orange, N. J.

CONSIGNEE

TELEPHONE REGISTRY.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER  
PROCESS AND MACHINERY PATENTS PENDING  
2302-2302 WEST ADAMS ST.  
2ND-21ST WEST ADAMS ST.  
CHICAGO.

Sept. 27th, 1909.

Geo. F. Scull, Asst. To Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

RECEIVED

SEP 29 1909

G. F. SCULL

Dear Sir:-

Some days ago we ordered from the Chicago Pneumatic Tool Company an air compressor and tank to be shipped to us in your care at Orange. We ordered the tool company to prepay the freight, but they call us up today and advise us that this matter was overlooked. Therefore, if you will kindly pay this freight and send us a bill for it we will be very glad to credit you with it.

Mr. Thompson left Saturday and is no doubt in Orange by this time. We calculated that the machinery would all be there early this week and he is to remain and set it up and get the Edison people started in this waterproof improvement.

I had an interview with Mr. Berst Saturday and he has promised before leaving Chicago to come out and see us. He says in his trip around he has heard a good deal about our proposition and most of it was favorable. He was particularly interested in the negative which I told him we had coated for Mr. Spoor. He was to see Spoor Saturday afternoon and look into the matter further. He gave me a reel to coat for him which will be delivered today. He says if this improvement had come up before the non-inflammable film he would not have hesitated to adopt it, but inasmuch as he has to pay 1/2¢ more for H. L. it will require considerable figuring for him to add another 1/3¢ to the product. I suggested that eventually this might be covered by increased price to the exchanges, but he seems to appose this. Says that he will not consent to increasing price, thinks the exchanges are paying enough now. However, as with waterproofed films the exchanges ought to be able to get more out of them Mr. Berst may change his mind.

Have not seen Mr. Spoor since his return from New York, but hopes to do so today.

Yours very truly,

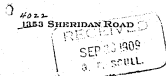
NATIONAL WATERPROOF FILM COMPANY

*P.S. Mr Berst and Montague  
will call on us this P.M. -*

*W. J. Scull*  
Pres.



W. A. G.



My dear Mr Scull

Just to keep you posted —  
Mr. Borat visited our factory yester-  
day. He evinced great interest in  
our proposition and machinery  
said he had but one objection to  
signing immediately and that was  
in the event of his leaving the M.  
P.P. Co. he would be obliged to change  
the character of his films (if we had  
5 licenses without him) He said  
our contract binds him closer to  
the Patents Co than to us. He also  
objected to the cost of waterproofing  
being covered by an advance in the  
price of films — I explained of  
course that I had no voice in

this. I think I shall let him  
rest until I have other con-  
tracts and by that time he may  
see his interests differently —  
I want to be in N.Y. again the  
week of Oct. 11<sup>th</sup>

Yours truly  
H. A. Quicks

Chicago  
Oct. 25-07

TELEPHONE KEDDICE-9.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-4322 WEST ADAMS ST.  
315-2117 WEST ADAMS ST.

CHICAGO.

Oct. 6th, 1909.

F. W. Lovejoy, General Mgr.,

Manufacturing Depts.,

Eastman Kodak Co.,

Rochester, N. Y.

Dear Sir:-

Answering yours of October 4th, we shall be pleased to waterproof for you without charge any number of feet required for your investigation or experiment. We shall be very glad of your approval of our claims:

- I. Our waterproofing is the first practical invention designed to protect the developed pictures of a moving picture film.
- II. Drying as hard as celluloid it is less liable to scratch than is the ordinary unprotected gelatine.
- III. If scratches should occur or dirt and grease accumulate the film may be easily washed with soap and water by rubbing through a wet cloth held in the hand.
- IV. Holding all the particles of the emulsion under cover it prevents sticking at the gate of the projecting machine. For this reason the loop has less vibration and consequently the pictures on the screen are steadier.
- V. It retards evaporation of the glycerine in the emulsion by bottling it up so to speak and therefore a waterproofed film will not become brash and brittle as soon as one not so treated.
- VI. Drying with a smooth shiny surface it allows more light to penetrate and therefore shows a clearer picture on the screen.
- VII. We believe that moving picture negatives coated with our solution will make clearer prints and assist materially in bringing out detail.
- VIII. Under a practical test in a projecting machine waterproofing does not add to the inflammability of your non-inflammable film i.e. Under an exposure to concentrated light rays it will not flame any more than will the same film which is not coated. Held in a certain way and subject to uniform air drafts N.-I. film can be made to flame by applying a match to the bottom edge. Under this test when waterproofed it seems to burn a trifle more readily, but so little more as to be scarcely noticeable. At any rate we claim that is not a practical test as no one is likely to hunt unusual condi-

OFFICERS:  
W. A. DANIEL, President,  
F. R. THOMPSON, Vice,  
S. A. BROWN, Secretary,  
F. R. BROWN, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WATERPROOF WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4300-4302 WEST ADAMS ST.

318-321 WEST ADAMS ST.

CHICAGO.

TELEPHONE REDDIE 404.

E. K. Co.--#2.

tions to burn something they should want to preserve.

IX. We claim that waterproofing adds to the strength of an E.-I. film, for while the coating is very thin it is exceedingly tough and has remarkable tensile strength.

X. Joints are not so liable to part after waterproofing, because of reduced friction and smoother joints. Ordinary joints:            Note black triangular spot which represents waterproof coating forming a slide for obstruction vs. the abrupt stop on uncoated film indicated by arrow.

XI. Waterproofing will not blister or peel, and if scratched off entirely in spots will not allow water to go between it and the emulsion.

Our coating machinery (patents allowed) spreads this solution all around the sprocket holes without clogging or going through. Our drying machinery (patents also allowed) is entirely different from the old style reels or drums. It has no tension and therefore cannot stretch a film nor put those ugly angles in it which are so often encountered from reel drying.

We court your complete investigation and any suggestions for improvement which you wish to offer will be thankfully and carefully considered.

Yours very truly,

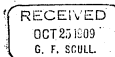
NATIONAL WATERPROOF FILM COMPANY

FROS.

*Palmer House*  
(*Typographer's Office*)  
*Chicago,*

Oct. 23, 1909

Mr. Geo. F. Scull,  
Asst. to the Vice President,  
Edison Mfg. Co.  
Orange, N. J.



My dear Mr. Scull:

My trip to Philadelphia resulted in a contract with Lubin, substantially the same as the one with the Edison Company. The principal change being that should Lubin find water-proofed films undesirable he can cancel the contract by written notice without continuing use for 90 days and without submitting his reasons therefor to arbitration. His argument was that if he found the process injuring his product he didn't want to be forced to continue the injury while a Board of Arbitrators considered the matter for three months. He said he would not allow our company to go to the expense proposed if he didn't believe in our process, and that he would continue its use indefinitely. He is certainly in a hurry to get started. Another difference between this contract and the Edison one is a clause providing that if the counter gets out of order or fails to register correctly Lubin's books shall be the basis for our bills. One other difference is that the solution shall be f.o.b. Philadelphia instead of Chicago, but this amounts to little as we shall eventually mix it in the east.

I interviewed Mr. Smith of the Vitagraph Company Wednesday evening and saw the reel run which we waterproofed for them. It has been in regular service and has been run about 360 times. It has not been washed and of course showed considerable rain. After seeing it on the screen Mr. S. examined it carefully and said he saw some good points about our proposition which I had overlooked. He would not say what they were. He was surprised to hear Lubin had signed for he said there was an agreement that none of the manufacturers would sign until after another meeting. He advised me to make no further efforts for contracts until such time when he felt sure all of them (the manufacturers) would follow Edison.

I met both Mr. Lovejoy and Eastman in Rochester Thursday. Mr. E. said as far as they had investigated they were favorably impressed with our improvement. Mr. E. is satisfied to supply us with solution made from N. I. base provided he can make it suitable. At present it is a slow dryer and unless they can find some way to hasten this we could not use it. He is not sure either that it would flow smoothly. However, he is to put his chemist to work and see what can be done. When he thinks they have something they will send us a gallon to try. Mr. Eastman wants nothing said about this at present, so please keep it between yourself and Mr. Dyer.

Now about finances: We have immediate need of the \$2000 balance Babson owes on the 100 shares of stock issued. He says he has not been authorized to pay it. I understood from you in New York that he had. At any rate will you please see that he is.

This will make \$10,000 he has paid in and will clear his account on our books. Even this amount will not carry us until we get sufficient returns to stand alone, especially as we must soon buy more machinery for Lubin. I want to order another five sets because it is cheaper than to get just three (Lubin's requirements). This alone means over \$5,000. besides solution we must make to supply him with. If we succeed in selling our foreign patents for \$30,000 or anything near it, we shall then be financially easy for all time. Transactions of this kind, however, are apt to drag even after agreements have been reached, so that we cannot calculate upon it in our present emergency. It seems necessary in addition to the \$2,000 referred to, that Babson should early next month subscribe and pay for another 50 shares of stock. If you have any other plans I should be glad to hear them. Meanwhile I remain,

Yours truly,

*W. A. D. Quicks Pro.*

P.S. Bell & Howel say new washing machine will be ready to test Monday or Tuesday.

\$308.47 worth of work done so far this month.

October 28, 1909.

Mr. W. A. Daniels,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Daniels:-

Yours of the 23d inst. has been received and I have taken it up with Mr. Dyer. Mr. Dyer believes that your concession to Lubin was a move in the wrong direction, since it will be possible for Lubin to throw back on your hands the whole plant which you may install for him, long before the royalties shall have paid for it. You will recall that we always figured that the royalties for three months would practically pay for the installation of the machinery, so that if a manufacturer gave up the process after that time, we would come out whole in the matter. Mr. Dyer suggests that you take up this matter at once with Mr. Lubin and tell him that your Board of Directors do not approve of this concession but that they would be willing to do so, provided that he guarantees the cost of building and installing the machinery in case he should ~~surrender his~~ license before the



#2

Mr. W. A. Daniels.

ninety days are up. Since Lubin has done nothing whatever under this license agreement, it is quite correct legally to have your Board of Directors repudiate the contract. You will appreciate that having given this concession to Lubin, it will probably be necessary to give it to all of the other Manufacturers and in case, for any reason, they in turn would give up the process before the ninety days are up, it would necessarily result in a very large loss for the Waterproofing Company.

The other two concessions which you granted to Lubin, Mr. Dyer thinks are immaterial.

Mr. Dyer has authorized me to write to Babson to take out the remaining \$2,000. in stock, which I have attended to today.

Yours very truly,

Assistant to Vice-President.

GFB/ARK.

Form 1.

**THE WESTERN UNION TELEGRAPH COMPANY.**

24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been accepted by the sender of the message, and the Company will not hold itself liable for errors or delays in transmission or delivery of messages or messages, or for any messages sent after the message is filed with the Company for transmission.

Messages on CABLES ARE DELIVERED, and are received by request of the sender, under the conditions named above.

ROBERT C. CLOWRY, President and General Manager.

RECEIVED at 238 Main St., Orange, N. J. Telephone 99. 1907

Dated *Li Chicago Mass*  
 To *Geo. F. Schell, Asst. Vice Pres Edison mfg Co*  
*Overlooked one other change.*  
*Phila contract Reading*  
*agreement shall not be*  
*constructed to prevent license*  
*from sale leaving or export*

**THE WESTERN UNION TELEGRAPH COMPANY.**

24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

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ROBERT C. CLOWRY, President and General Manager.

RECEIVED at 238 Main St., Orange, N. J. Telephone 99. 1907

Dated

*films so coated with*  
*said process in any*  
*countries of Europe in*  
*view of possible Best*  
*sale should this be put*  
*out answer quick our*

**THE WESTERN UNION TELEGRAPH COMPANY.**

**24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD**

This Company TRANSMITS and DELIVERS messages only on conditions limiting liability, which have been accepted by the sender of the following message. Errors can be guarded against only by repeating a message back to the sending station for confirmation and the Company will not hold itself liable for errors or delays in transmission or delivery of Unrepeated Messages, beyond the amount of tolls paid thereon, nor in any case where the claim is not presented in writing within sixty days after the message is filed with the Company for transmission. This is on UNREPEATED MESSAGES, and is delivered by request of the sender, under the conditions named above.

ROBERT S. CLOWBY, President and General Manager

73	NUMBER	TEST BY	REC'D BY	CHECK
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RECEIVED at 238 Main St., Orange, N. J. Telephone 90 *2707* 190 *4*

Dated: 1

To: \_\_\_\_\_

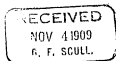
Board meets ten o'clock  
tomorrow

W. A. Daniels

*Palmer House*  
*(Telegraph Office)*  
*Chicago.*

November 2, 1909.

Geo. F. Scull,  
Assistant to Vice President,  
Edison Mfg. Co.,  
Orange, N.J.



My dear Mr. Scull:

In reply to your 28th ult., I found yesterday that I had overlooked advising you of one other change in contract with Lubin. I therefore wired you as follows and now confirm:

"Overlooked one other clause Philadelphia contract reading 'Agreement shall not be construed to prevent licensee from selling, leasing or exporting film so coated with said process in any countries of Europe.' In view of prospective Berst sale should this be cut out. Answer quick, our Board meets ten o'clock tomorrow."

I think this is of more importance than the cancellation without notice clause, and am glad to have this verified by your telegram just received, reading:

"In view of possible Berst contract, think very unwise to make any guarantees as to sale in Europe of American water-proof films."

Our Directors met this morning and I enclose you a copy of their minutes, So that you may be fully satisfied, I am sending the Lubin letter and resolution to Thompson for his signature

-2-

with a request that he submit it to you, and if O. K. mail it from Orange to Lubin in Philadelphia. If not correct, all papers may be returned to Chicago where changes you may suggest will be made and then mailed direct. Thompson's signature is really not essential, and possibly not legal, because of his absence from the meeting. If you so decide, he can withhold his signature from the resolution and mail to Lubin just the same. I feel that in over-anxiety to close with Lubin, I made an ass of myself, for which I hope Mr. Dyer will pardon me long before I forgive myself.

Babson says he will give us \$2,000 tomorrow, but I have an idea it comes hard, and that he is depending upon a resistance from you. However, this is intuitive only, as I know nothing of your financial relations. I do know, however, that \$2,000 will do us but very little good and that he should subscribe for another \$5,000 of stock at once.

Acting on the advice of Vitograph Smith, I am anxiously awaiting the results of next Patent Co. meeting. Can you say when it will occur?

Washing Machine test has been put off by Bell and Howell until tomorrow.

Yours truly,

*H. A. Daniel*

Edison

November 11th, 1909.

Mr. Dyer:-

The situation in reference to the National Waterproofing Company is substantially as follows:

The machinery for the Edison Company has been fully installed and a complete amount of coating material to last for several weeks has been provided. Mr. Daniels, the President of the Company, has been travelling around considerably the last few months interviewing the various Manufacturers and getting them interested, and succeeded in signing a contract with Lubin. This contract was not wholly satisfactory, and the Waterproofing Company has notified them that they are not prepared to go on with it in its present shape. Lubin will undoubtedly agree to the modifications, which are not of great importance. The remaining Manufacturers all speak highly of the proposition and express their willingness to join in the coating of film. In some cases, however, it will be a physical impossibility for them to install the necessary machinery in their plants, and I think there is a tendency to hold back until they see the result of the coating by the Edison Company and its effect on the trade. Pathe Freres, represented by Mr. Berst, has told Mr. Daniels that he wishes to take up the proposition, and would recommend it to the French Company. Mr. Berst also is negotiating for the

purchase of the foreign patents and has taken to Paris a written proposition from Mr. Daniels offering to sell the foreign patents for \$30,000, provided Pathe Freres in this country sign a license agreement. Mr. Berst told Mr. Daniels that he would personally recommend this arrangement.

The Waterproofing Company has built two additional sets of machines, besides those installed in the Edison Company's plant, in anticipation of additional licensees. Up to date, the Waterproofing Company has spent about \$9,000., the largest item in this is some three thousand dollars for the building of the five sets of machines, which does not include the amount expended by the Company in installing the machinery in the Edison Company's plant, which will run up to quite an item. The weekly pay-roll of the Company amounts to about \$125. of which Mr. Daniels and Mr. Thompson each receive \$30., the remainder being made up by the salary of the stenographer and workmen around the plant. Mr. Daniels' travelling expenses have also been necessarily heavy. This amount also includes the attorneys' fees for filing and prosecuting U.S. and foreign applications, and a considerable amount of coating material has been prepared and is on hand in Chicago, undergoing an ageing process.

Mr. Babson has now advanced \$10,000. and has written requesting that this amount be repaid as soon as possible. Mr. Babson reports that the affairs of the

Company in Chicago are being managed economically, and to prepare for possible contracts, which will involve the building of new machinery, it might be advisable to advance \$5,000. more to the Waterproofing Company, as we are obligated to do under our contract. This latter sum, however, is not urgently needed, since they have about \$1500. in the bank which will cover current expenses.

G. S. S.

GFS/ARK.



Nov. 13, 1909.

Mr. W. A. Daniels,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Daniels:-

Mr. Dyer suggests that you obtain copies of the patents on the Drier and Coater, just issued to the Waterproofing Company, and send them to the Licensed Manufacturers with the statement that other and broader applications are pending on the method and article. Mr. Dyer believes that this will not only tend to stir them up, but will show that there really are some patents back of your proposition.

Yours very truly,

GFB/ARK.      Assistant to Vice-President.

TELEPHONE REDDICK 604.

OFFICERS:  
W. B. DUFFIELD, President  
J. G. CAMPBELL, Vice-Pres.  
J. B. BROWN, Secretary  
J. B. BROWN, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

1030-1032 WEST ADAMS ST.

CHICAGO.

Nov. 15th, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Company,

Orange, N. J.

RECEIVED  
NOV 17 1909  
G. F. SCULL

Dear Sir:-

We are in receipt of yours of the 13th and wish to thank you for your suggestion as to procuring copies of our patents. Same has already been acted upon.

It may interest you to know that Friday last, we closed a contract with Mr. Spoor which is in every way identical with the contract we have with you. We have been told that Mr. Selig has stated that he would sign with us if Mr. Spoor did, so we are going to get after him scientifically in a few days.

We have just had a telephone call from Mr. George Kleins who in his sweetest tones informs us that he has three sets of eight pictures, each set consisting of 2500 feet which he is about to ship to the Yale Amusement Company and that the Yale people want them waterproofed. You know we have done work for the Yale Company before and this is evidence that they are pleased with the results.

Saturday we had a call from Mr. Arthur Roussel, whose card states that he is manager of the Pathe Freres factory, Bound Brook, N. J.. He brought credentials from Mr. Berast and says that he came specially to see our machinery. He returned East Sunday night. He requested a coating machine to send to Paris so that Mr. Pathe could examine it, but we have none we could spare for that length of time so compromised by promising to have some photographs taken which we will send him in a few days. He expects Mr. Berast to arrive in New York Saturday next. He seemed very well pleased with our machinery, asked a lot of questions about it and saw us coat a film.

No other news at the present time, so we remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. B. Duffield* Pres.

*note copy of Lubin letter  
recd. this am  
H. B.*

November 18, 1909.

Mr. Thompson:-

I have been going over the matter of amending the claims which have been rejected by the Patent Office with Mr. Dyer, and some question arose as to what really takes place when your air blast is applied to the film. I understand that you use a pressure of about 60 lbs. Does this blast dry all coating material out of the perforation, so that the perforation is identically the same size on the coated and uncoated films? You might test this by measurement or by running a piece of film over, which has been stained black, so that we will be able to see the layer of clear coating material on the inside of the hole, if any remains there. If, as a matter of fact, the size of the perforation is unchanged, we may be able to distinguish your process from the wire screen painting machines cited, because obviously, in the latter case, the perforations must necessarily be filled up, else the wires would not be protected. After you have determined this question to your satisfaction, I would be pleased to talk it over with you.

G. F. S.

GFS/ARK.

TELEPHONE KEDZIC 654

OFFICERS:  
W. A. BARTON, President,  
J. B. THOMPSON, Vice-President,  
E. B. BARTON, Secretary,  
E. B. BARTON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4300-4302 WEST ADAMS ST.

318-317 WEST ADAMS ST.

CHICAGO.

Nov. 20th, 1909.

RECEIVED

NOV 22 1909

G. F. SCULL

Edison Mfg. Co.,

Orange, N. J.

Gentlemen:-

Patents for waterproofing machinery (coater and dryer) have recently been issued to us as per enclosed copies. Other and broader Patents, on the improvement of films made washable in water as well as the method by which we accomplish this, will soon be issued to us.

We are building through Messrs. Bell and Howell of this City a small compact washing and drying machine. This we propose selling to Exchanges at a low price to facilitate keeping films which are waterproofed in clean and rainless condition. This machine can be worked by hand or by a small motor (1/12 h.p.). Embodying several new and useful principles this machine will be protected by patents. It will be ready for the market within three or four weeks.

We now have contracts with film manufacturers which will require all the waterproofing machinery we can build and install up to February 1st. This is our apology for urging your immediate and serious consideration of an arrangement with us, by which as soon as possible your product too may be waterproofed. This process has so many advantages over the old style of unprotected film that it must soon supersede the old altogether. We believe the opportunity offered you and your confreres to control this improvement should be acted upon at once by you.

If there is any part of our proposition you do not understand we shall be glad to explain further by letter or personal interview through appointment.

Awaiting your early reply, we remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*H. A. L. Gairns* Pres.

November 30/09.

Messrs. Gillson & Gillson,  
Monknoch Building,  
Chicago, Ill.

Gentlemen:-

Yours of the 11th inst. with enclosure was received by Mr. Dyer, and the references have been carefully considered. Of course, you will appreciate that the first objection to the references is that they relate to a non-analogous art and would hardly suggest the process of the application.

The greatest difference between the process of the application and the cited art seems to be that in the former, the air blast must be used in such a way as to prevent not only the coating material from working through to the back of the film, but also from remaining in the perforations. In other words, the size of the perforation before and after coating is exactly the same. On the other hand, in the wire painting devices, some of the paint must remain in the perforations, otherwise there would be an uncoated section of each wire which would have a tendency

to rust it. In other words, in the process of the application, an air blast relatively strong as compared with the viscosity of the coating compound, is used, whereas in the painting machine an air blast relatively light compared with the viscosity of the paint, is used. It would seem that the first claim could be distinguished from the prior art by adding some such phrase as "and removing the coating material completely from said perforation". The second claim might have added to it "such air blast having sufficient force to remove the coating material from the said perforation". It would seem as if the third and fourth claims are not anticipated. The whole idea in back of the wire coating machines is to have every part of the wire covered with paint, whereas, in the application the idea is to have only a certain very restricted portion of the film coated, and therefore, claim 3, it would seem, is sufficiently limited to distinguish. Certainly claim 4 is.

In going over the coating process as now used, in the Edison Company's plant, several things have cropped up which the patent applications might be made to cover. For instance, unless the film is carried through the coating machine at a speed sufficiently high, the coating material wells up through the perforation when the film is over the first roller and would flow over the back of the film. In other words, there is some relation between the

Messrs. Gillson &amp; Gillson.

rate of flow of the coating compound and the rate at which the film must go through the machine, in order to accomplish the desired results. Mr. Thompson also discovered that coating film immediately after it comes from the developing baths, obviates to a large degree the wetting of the surface, and unless the application of Mr. Thompson covering the wetting of the film before applying coating material is broadened somewhat, it will have little value.

It would seem that the claims of this application could be so worded as to cover the idea of covering a previously dampened film before the water has had an opportunity to dry out. This would include not only the process as carried on by Mr. Thompson in his plant in Chicago, but also as carried on in the plants of the manufacturers of film.

Mr. Dyer suggests that the claims at present in the case be allowed to remain, and that you should attempt to get them by a discussion with the Examiner pointing out the great differences in the arts and the end to be accomplished.

He also suggests that you work up some additional claims embodying the foregoing suggestions and insert them in the application so that in case the present claims are rejected, we will still be able to fall back on the narrower ones.

I return herewith copies of the patents cited.

Yours very truly,

OFS/ARK.  
Encs.

Assistant to Vice-President.

Dec. 2, 1909.

Mr. F. S. Thompson,  
c/o National Waterproof Company,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Thompson:-

I regret to say that trouble has developed on the coating machines and I thought you should be advised of it as soon as possible, so that you can give some thought to it and also guard against the same thing occurring in the new machines which you are building.

The guide rods for the tapes on the drier, by reason of the rubbing of the tapes against them, are becoming covered with a very fine dust, evidently worn from the edge of the tapes. This accumulation became so bad yesterday that it was necessary to stop coating. Cleaning the rods, of course, removes the accumulation, but obviously this cannot be done all the time, and the dust is so fine and light that it readily shakes onto the wet film. We have removed the guide rods from the rear half of the drier where the film is wettest and have run



#2

Mr. F. S. Thompson.

four or five reels over it today, and find that the tapes run true without these guide rods. This, of course, obviates the greatest difficulty, although it does not eliminate it entirely, and I have given instructions to remove the guide rods as an experiment, throughout the machines. If this works satisfactorily, of course, the difficulty is removed, but I think you should know that wherever you find it absolutely necessary to provide a stop guide for a tape it should be in the form of a roller or a flange moving with the tape, and not a stationary member. Mr. Jamison tells me that you assured him that these guide rods were absolutely necessary, but as you have added a number of heavily flanged guide rollers I can readily see that the original reason for these guide rods has been removed without your realizing that the original difficulty has been overcome by the flanges which you added later.

I shall keep you informed of the result of today's experiment and of any other changes which we may make.

Yours very truly,

GFS/ARK.

Assistant to Vice-President.

OFFICERS:  
W. A. DAVIS, Pres.  
F. B. THOMPSON, Vice-Pres.  
C. E. HARRIS, Secretary  
F. J. HARRIS, Treasurer



## NATIONAL WATERPROOF FILM CO.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.  
818-817 WEST ADAMS ST.

CHICAGO.

TELEPHONE REDDIE 629.

Dec. 4th, 1909.

Mr. Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

Your favor of the 2nd to our Mr. Thompson is received this morning and he wishes me to say in reply that our new machines will be made without the wire sectors and with the heavily flanged guide rollers which you now suggest. We believe this must overcome the dust from the edge of the tape which you speak of.

We have had a very busy week with quite an order from Lyman H. Howe. Since last Saturday our business has amounted to \$269.00.

We will ship next week four tanks of solution to you. Mr. Thompson calculates by the time it arrives in Orange you will almost be ready for it. Even though you are not in need of it I believe it good judgment to ship it in view of a possible freight tie up as now existing in the Northwest.

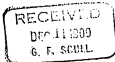
Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

Pres.

P. S. / Mr. Thompson says you have one tank of thin solution and one or more empty tanks which you were to return to us. If they have not already been shipped please see that shipment is made at an early date. When received will send you credit memorandum.

Note on "ad" in Sec. Nickelodeon sent you under separate cover



Chicago  
December  
9th  
1909.

Mr. Geo. F. Scull,  
Asst. to V.Pres. Edison Mfg. Co.,  
Orange, New Jersey.

My dear Mr. Scull:-

I think we are making progress with Selig but nothing so far which is tangible. Klein, however, seems to be falling in line like a veteran. We have recently water-proofed about 50 reels of new fight pictures for him. Yesterday he gave us a set of these (unprocessed) films which had been run many times and were in bad condition. We cleaned and waterproofed them, as we judge to his satisfaction, for to-day he writes us to call every Wednesday and Saturday for his Biograph releases of Thursday and Monday. This means only two reels a week which will be used in his rental department. He states, however, that if good reports follow these two he will have all of his rental releases waterproofed. This is a right about face forward march movement on his part both pleasant and surprising.

Mr. Thompson is busy remodeling one of our drying machines, which should be completed and tested early next week. He will then make up 10 bbls. of solution (material for which has been ordered). After this he will put in another week or two in Orange. We want to find why your films are so much more twisty than any others we get. The three we get every week from Spoor for T.&D. of San Francisco give us no trouble at all. These are very fresh too, in fact so fresh that we sometimes must wait for them at Spoors until they are dry enough to reel up.

Today's Biograph film for Klein ran perfectly. Mr. Thompson thinks the heat in the vault in which your raw stock is carried may

Mr. Geo. F. Scull.

-2-

12/9/09.

have something to do with it. It should be easy of demonstration by storing (when received from Eastman) a can or two in a cool place.

Mr. Thompson thinks also that films should be reeled up from the wooden drums instead of being taken off in skeins when every strand is turned like a figure eight. He thinks this twist becomes permanent or at any rate persists to some degree. He would like with your cooperation to experiment in avoiding this twist.

Mr. Thompson feels sure that his revised drying machine will cause no dust but fears your drying room and coating room will never be free from this trouble in present locations. Our washing machine is growing into a sure success and I shall issue a general letter Saturday, regarding it (copy enclosed.) Gilson says there are claims on it, which can be patented and unless you have other views I have decided to let him try.

I wish you would let me hear from you regarding further stock subscriptions by Babson. You have not answered my Oct. 23rd on this subject. We are not suffering at present but I want to avoid it in the future.

We have in bank today	\$1240.32
Petty cash	42.84
Miscl. Accts. receivable	858.23
* do. Edison Mfg. Company	1125.00
	<u>\$3266.39</u>

\* This is for solution sent few days ago and includes one tank. (\$225.00) sent to replace one you are to return.

We owe only about \$300.00 but we have out standing material purchases which will require about \$1000. We shall no doubt within 30 days collect in the Miscl. accts. but in the mean time others will be on our books. In other words we shall always have from \$600. to \$1000 out standing.

We have not yet placed order for Spoons machinery nor shall we un-

Mr. Geo. F. Scull.

-3-

12/9/09

til the new dryer has been tested.

I wrote Mr. Berst yesterday that I would call on him at any time he said - just a gentle push you know. His reply may determine how soon I shall see you - Meanwhile I remain,

Yours truly,

WAD/BAP

*W.A. Scull*

TELEPHONE HERDIE 695.

OFFICERS:  
W. A. DANFELS, President,  
J. A. THOMPSON, Vice-Pres.,  
G. B. BROWN, Secretary,  
F. C. BROWN, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.

215-217 WEST ADAMS ST.

CHICAGO.

Dec. 11th., 1909.

G. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

For the purpose of testing your films on our revised drying machine we write to ask if it would be possible for you to send us 8 or 10 uncoated reels intended for Mr. Hardin. We will coat and deliver to him in time for regular shipment, but in order to do this they would have to be shipped to us a day or two earlier than usually shipped to him. So far as we are concerned one day earlier would be time, but owing to our location the express is sometimes slow in delivering so if you could arrange for two days advance shipment all possibility of delay would be overcome.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Danfels* Pres.

Form No. 308.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**24,000 OFFICES IN AMERICA. INCORPORATED CABLE SERVICE TO ALL THE WORLD.**

This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been accepted by the sender of the following message. It transmits or delivers Unrepeated Messages, beyond the amount of time paid thereon, not in any case where the funds are not presented in writing within sixty days after the message is filed with the Company for transmission.

This is an UNREPEATED MESSAGE, and is delivered by request of the sender, under the conditions named above.  
ROBERT C. CLOWRY, President and General Manager.

**RECEIVED** at 238 Main St., Orange, N. J. Telephone 80.

37 lg or 8 Paid

OG Chicago file Dec 16-9

Geo F Scull

Care Edison Mfg Co

Orange N J

Ready now for eight or ten Hardin Reels

National Water-proof Film Co

337pm



Dec. 16, 1909.

Mr. F. B. Thompson,  
National Waterproof Film Company,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Thompson:-

I enclose a small section of a film  
sent out by us about November 23d, which has been returned  
to be replaced. You will note that the waterproofing has  
not adhered to the emulsion. It is true that one side  
of this film has evidently been badly rubbed by a worn  
roller, but nevertheless the centre portion will also  
blister when bent, showing that the waterproofing does  
not adhere. I have no means of knowing what caused this  
and I would be pleased if you will let me know what you  
surmise is the trouble. In any event, I thought you  
would be interested in seeing this sample.

Yours very truly,

GFG/ARK.  
Enc.

Assistant to Vice-President.



Dec. 17, 1909.

Mr. W. A. Daniels,  
National Waterproof Film Company,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Daniels:-

Your telegram has been received.

On inquiry I find that our printing plant is working right up to the shipping point and there is apparently at the present time, practically no leeway in shipments made to Mr. Hardin. The Kinetograph Department also express some concern of the possibility of any of the films being damaged, which would, of course, delay their receipt by the exchanges. On further and more careful consideration, and in view of the foregoing, it seems to me inadvisable to have these films shipped to you.

Yours very truly,

GFS/ARK.

Assistant to Vice-President.

TELEPHONE REDUCED.

OFFICERS:  
W. A. DANIELS, President,  
F. B. THOMPSON, Vice-Pres.,  
G. B. BROWN, Secretary,  
J. C. BROWN, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4202-4203 WEST ADAMS ST.  
318-3117 WEST ADAMS ST.

CHICAGO.

Dec. 18th, 1909.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. J.

My dear Mr. Scull:-

Mr. Thompson wishes me to say in reply to yours of the 16th, that the film complained of was evidently coated without passing through the sizing. Mr. Thompson has sized one end of the piece you sent and coated it; it is herewith returned; you can see the difference at once. We expect it will be difficult to get an admittance from your coating room that this film was not sized, but the evidence goes to show that such was not the case.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.

OFFICERS:  
W. A. BABSON, President  
F. K. BABSON, Treasurer  
J. H. BABSON, Secretary  
J. H. BABSON, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.  
218-2117 WEST ADAMS ST.

CHICAGO.

TELEPHONE REDDERS.

Dec. 27th, 1909.

F. K. Babson, Treas.,

National Waterproof Film Co.,

Chicago.

Dear Sir:-

The machines we installed in the Edison plant were identical with the ones used here and such that we had every reason to believe would work satisfactorily. Conditions encountered with Edison films, however, called for some experimental changes which Mr. Thompson started when in Orange, and someone has religiously continued since he left. From unofficial sources we learn that these changes have forced matters from bad to worse until the coating plant of the Edison Manufacturing Company is in a very much demoralized condition. Mr. Thompson would have returned to Orange before this except that he has himself been exceedingly busy trying to improve machinery here to take care of conditions as found at the Edison plant. In this line, working night and day, he has overhauled all of our coaters and rebuilt one drying machine entirely.

Machine shop cost on this to date has been about \$300.00, but he feels confident that we now have a machine which will take care of a product like the Edison and he will leave tonight for Orange. It is his intention to rebuild the Edison drying machines to correspond with the new model here. As evidence that no time has been lost I can say to you that we have paid considerable for over time and that parts of this revised machinery was delivered to us at midnight Thursday last.

No one worked Christmas, but yesterday four of us were busy all day compounding solution of which we have a dozen (value \$2400.00) tanks made and paid for with the exception of about \$700.00 due February 9th.

The new exchange washing machines cost for experimental work nearly \$300.00, (paid) and as we are building ten of them at \$66.00 each, we shall soon need \$660.00 for this purpose.

We have ordered three sets of machinery for the Spoor contract at a price of \$570.00 each, but this does not include some new patterns, brushes, tape and heaters.

Our rent (\$100.00) is due next week and we have a pay roll Saturday (136.00). Our cash on hand is \$228.03 from which Mr. Thompson will take \$50.00 for his today's expenses East.

OFFICERS:  
W. A. DANIELS, President,  
F. S. THOMPSON, Treasurer,  
G. B. BROWN, Secretary,  
F. W. HARRIS, Director.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.

CHICAGO.

This in brief is the situation which I am sure will convince you that the purchase of five thousand dollars more stock does not mean a plethoric bank account, but an actual necessity to our existence.

As the first of the year means the first six months of our Company Organization, we are working upon a semi annual inventory and I shall be pleased to hand you next week a complete statement of our affairs, a list of assets and liabilities, a balance sheet and such other figures as may be desired.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.

P. S. My December 9th referred to said, we have in  
Bank today ----- \$1240.32  
Petty Cash ----- 42.84  
Misc. Accts. Receivable ----- 866.33  
Edison Company Acct. ----- 1125.00  
\$3274.39  
At that time we owed ----- 300.00 which has since been paid,  
leaving ----- \$2974.39

Since then there has been a credit to Edison Company for returned solution, \$234.00. The balance of their account is still unpaid so far available cash we must deduct \$1125.00, leaving \$1841.39.  
Our Misc. Accts. Receivable today are ----- \$425.14  
This must also be deducted leaving ----- \$1406.25  
Since the 9th we have had 2 pay rolls amounting ----- 406.00  
Which we also deduct, leaving ----- \$ 998.25

We have cash on hand of \$228.03, showing that we have spent since the 9th an additional \$770.22. Without itemizing, our books will show that we have spent this for chemicals, machinery and general expense, and to continue doing business we are in immediate need of more capital.



Chicago, Jan. 8, 1910.

Mr. Scull,

c/o Nat'l Phon. Co.,

Orange, New Jersey.

Dear Mr. Scull:-

The Directors of the National Waterproof Film Company had a meeting yesterday afternoon, and I enclose herewith inventory, financial statement, and report of the President.

The inventory and financial statement were accepted, but the report of the President was laid on the table, for the reason that we could not see any good reason for opening a New York branch. The principle argument against this was that the plant now in operation here is being run at a big loss, and we could not see on what basis we would be justified in opening a New York Waterproofing establishment.

Of course, this matter is entirely up to you, and if you approve of it we will have another Directors' meeting just as soon as Mr. Daniels returns from the East.

I do not entirely approve of the inventory, for I think a great many of the items are high, and in case of solution I believe it is entirely wrong. The price figured is the retail selling price, and not the cost price; thus the inventory shows a selling profit before the sale has been made. This would reduce the inventory eleven or twelve hundred dollars. However, with an accurate understanding of the matter I cannot see that there would be any harm in accepting the inventory just as he has made it.

Regarding the financial statement, there has been

PLEASE WRITE YOUR REPLY ON THE OTHER SIDE.  
WHEN WRITING ALWAYS USE YOUR CORRESPONDENCE NUMBER.



Chicago.

Mr. Scull.

#2.

received by the company a check from the Edison Manufacturing Company, so that after paying several bills, we still have a balance on hand of \$403.94. This still leaves other bills, for which money will be needed between now and the first of the month. One is for Bell & Howell amounting to \$660.00, which is for ten washing machines, that I presume were ordered with your permission.

Regarding the Spoor contract, I have not seen this contract, but presume you have. Mr. Daniels informs me that it is an exact duplicate of our contract with the Edison Manufacturing Company. The loss to date consists of the salary account, rent account, travelling expenses, and patent expenses. The profit in coating films would just about cover the incidental expenses.

Yours very truly,

*J. K. Babson*

FXB-278

W. F. Scull

4024  
1284 SHERRIDAN ROAD

W. F. Scull

Asst. to V. Pres.

Edison Mfg. Co.  
Orange N. J.

My Dear Mr. Scull

I find upon my arrival  
that we have had a busy week  
including a lot of orders for  
Synchro Hobs - I should like Mr.  
Syer to read Hobbs letter inclosed  
after he has done so to kind  
enough to return it and oblige

Yours truly,

W. F. Scull

Chicago  
Jan 17/1910

Jan. 19, 1910.

Mr. W. A. Daniels,  
National Waterproof Film Company,  
4200 West Adams Street,  
Chicago, Ill.

My dear Mr. Daniels:-

Yours of the 17th inst. with enclosure is at hand. I have shown Mr. Dyer the letter, as requested by you, and return the same herewith. In this connection, you may be interested to know that Mr. Elsie stated the other day that he had some unwaterproofed inflammable fight pictures go to pieces just the same as the waterproofed pictures, and that in his opinion the waterproofing did not affect the result. On the other hand, I think there was some lingering question in his mind whether the waterproofing did any good or not. He had a letter from Mr. Flinton in which the latter stated that the Edison waterproof film had not been in use a sufficient length of time for him to determine whether or not they are advantageous. Mr. Marvin of the Biograph Company was present and remarked that it appeared that the waterproofing had some advantages, but hardly sufficient to pay for the trouble and expense in coating.



#2

Mr. W. A. Dahiela.

These statements may give you an inkling as  
to what the other Manufacturers have in mind.

Yours very truly,

GFS/ARK.  
Enc.

Assistant to Vice-President.

HOTEL IMPERIAL, NEW YORK.

January 27, 1910.

Mr. G. F. Scull,  
Assistant to the President,  
Edison Manufacturing Co.,  
Orange, N. J.

Dear Sir:

A special invitation is extended to you, to call at Room 149, Hotel Imperial, and see a washing machine which washes, dries and polishes a reel of waterproofed film in from eight to ten minutes. The machine will be here the balance of the week.

This invitation also includes Mr. Dyer, if he is in New York.

Yours truly,

NATIONAL WATERPROOF FILM CO.

TELEPHONE REDDIE 469.

OFFICIAL:  
W. A. DAVIS, President  
E. E. THOMPSON, Chief  
S. BARON, Secretary  
J. H. BROWN, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

1800-1822 WEST ADAMS ST.

CHICAGO.

Feb. 4th, 1920.

Mr. George F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Company,

Orange, N. J.

Dear Sir:-

I was unable to see Mr. Berst again before leaving New York, but from the talk I had with him previous to telephoning you I feel confident that we will connect with him. The Vitagraph Company I feel will be next, as they intend to put up a new building in which they have planned a coating room.

Had a very pleasant visit with Mr. Singhi in Philadelphia; was invited out to his house and to see the new factory. In speaking of the cancelled contract he said it was really the best thing for both of us because in their present quarters they really did not have a place to put it, but as soon as the new factory was finished they would adopt the coating proposition. He was very much pleased with the washing machine for cleaning water-proofed films and we are going to send one to his exchange. He congratulated me several times on the talk I gave the convention and said that this was the first time in his experience where any outsider had such a chance. Of course all this made me feel good.

We have made some very good friends this trip with such people as Howard, of Boston, Miles of New York, Lieber of Indianapolis and many others.

I want to caution you not to allow your stock of solution to get down too low and to say that I should be pleased to receive an order for five or six tanks from you by return mail.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis* Pres.

*We are out of money - In keep our credit  
I have this day advanced \$2,000. - Please  
arrange for Raborn to take that other \$500  
worth of stock as soon as possible*

*W. A. Davis*

OFFICERS:  
W. A. DANIELS, President,  
J. E. THOMPSON, Vice-Pres.,  
C. R. RANSON, Secretary,  
F. C. RANSON, Treasurer.



# NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.

CHICAGO, ILL.

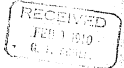
TELEPHONE HEDDIEBORN.

Feb. 7th, 1910.

George F. Scull, Asst. To Vice-Pres.,

Edison Mfg. Company,

Orange, N. J.



Dear Sir:-

We expect the Spoor machinery will be ready to deliver on the 15th, and allowing for contingencies cannot be more than a few days later. This will call for a payment of \$1710.00. In addition to this we shall have to supply heaters and air condenser; this will use up from \$150.00 to \$200.00 more. I have today contracted with Bell and Howell for 20 more washing machines at \$52.00 each. These are promised in from three to four weeks.

I called at Spoor's plant yesterday and met his manager, Mr. Hamilton. I find him <sup>an</sup> extremely intelligent and a well bred gentleman. He is very much in favor of waterproofing, but up to this time Spoor has done nothing towards supplying a place in which to put our machinery. He promised to take the matter up upon his return from New York where he went yesterday in company with Messrs. Kleins and Selig.

We are getting many inquiries for washing machines and could place ten more than we have on hand at once. I sold one to Mr. Spoor yesterday.

I am still enthusiastic over the progress made in the last trip to New York. The business looks surer to me now than ever before, but we certainly need capital. If you can bring any influence to bear on Friend Babson I shall be under many obligations.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*Handwritten signature*

PRES.

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

INCORPORATED  
24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

ROBERT C. CLOWEY, President and General Manager.

Receiver's No.

Time Filed

Check

**SEND** the following message subject to the terms  
on back hereof, which are hereby agreed to.

Feb. 22, 1910.

W. A. Daniels,  
4200 W. Adams St., Chicago, Ill.

Think you acting unfairly towards Thompson. Only  
stopped at my request and believe have already solved difficulty  
and enormously improved product. Expect to start Monday sure,  
possibly tomorrow. If you wish, will carry Thompson's expense  
and salary while here, charging against royalty.

Frank L. Dyor.

(Chg. Mfg. Co.)

READ THE NOTICE AND AGREEMENT ON BACK.

OFFICERS:  
W.A. DAVIS, President  
F.L. Thompson, Vice-Pres.  
G. BARNES, Secretary  
T. A. BARNES, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.  
2118-2117 WEST ADAMS ST.

CHICAGO.

Feb. 23rd, 1910

Frank I. Dyer, Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

My dear Mr. Dyer:-

I am in receipt of your telegram of the 22nd regarding Thompson. I am sure I do not wish to be unfair to anyone. Thompson's wife draws his salary here every week and we send him \$25.00 more. \$250.00 per month is quite a drain on a business taking in only about \$300.00 a month.

Thompson has never invested a dollar in the business so the least he should do is to put in some economy. I believe he has an idea that his associates are Rockefellows and Morgans who will some day make his interest worth a lot of money no matter what he may spend at this time. His expenses from Orange to New York have averaged \$5.17 per week for the past three weeks. I cannot continue O.K.'ing things like this without objecting. I think under the circumstances of his having to remain so long in Orange that he should have one half his salary sent East and relieve the Company of all his living expenses. I also suggested that as soon as your plant was coating satisfactorily and having no further experiments to make that we cut out both his salary and mine until the business was further advanced. Under such an arrangement he could not live so I further advised his finding outside occupation for a time.

I want to thank you for your offer to advance him money, but I cannot see that the situation would be relieved by his drawing from your Company that which we should eventually have to pay. I therefore, prefer to go along as at present.

Mr. Spoor has done nothing towards providing a place for his coating machinery, and is acting much like a crawfish. I have not allowed him to say that he would not put in the machinery, and I have delayed making a formal demand until we are absolutely ready to deliver (about March 1st). It seems that at the last New York meeting of the Patents Company, S. asked several manufacturers if they intended to waterproof, and from their negative answers concludes that no advance in the price of film to cover water-proofing is possible. He thinks our price too high under such a prospect. I asked him why he didn't get them all together and secure a wholesale rate from me. He thought this a good idea and said "He would work along this line", and so far as I know here the matter has rested since the 12th.

Mr. Singhi told me in Philadelphia that as soon as their new factory was completed he would contract with us and in plain English stated that he

*Don't  
talk with Wm. Thompson  
if necessary  
Am*

TELEPHONE KEDDIE 664.

OFFICES:  
W. A. DANIELS, President,  
215 W. Madison St., Chicago.  
G. B. BROWN, Secretary,  
215 W. Madison St., Chicago.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING

4200-4202 WEST ADAMS ST.

215-217 WEST ADAMS ST.

CHICAGO.

Mr. F. L. D.--#2.

did not think our price exorbitant being only about 3% on the net selling price. I have been thinking of suggesting to him the advisability of having all his Western releases coated by us at once. This would embrace a large territory for the Enterprise Optical Company (Lubin's Chicago agents) tell us that their territory extends from Buffalo West. I do not believe the trade these people give Lubin is satisfactory. It seems to me that most of their Enterprise rests in their title, or is devoted to the sale of their machinery.

We have almost concluded an arrangement with the Theatre Film Supply Exchange in this City to have all of their releases (20) Waterproofed and properly taken care of under our supervision. They are to put in sufficient washing machines to take care of their business and allow us to inspect the work whenever we choose. I am very anxious to see the result of such an experiment for 90 days; I believe it will add many customers, after which it will be easy for them to get some advanced prices because of the condition of films served. Mr. Aiken is quite enthusiastic over the proposition which he proposes to extensively advertise if he goes into it. I have cut our price to \$3.50 per reel to give the matter a thorough test for 90 days.

We have been quite busy since the 15th with prospects of a continuation for the balance of the month.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels*

Pres.

Feb. 26, 1910.

Mr. W. A. Daniels,  
4200 West Adams Street,  
Chicago, Ill.

My dear Mr. Daniels:-

I have seen your letter of the 23d inst. to Mr. Dyer in regard to the waterproofing situation generally, and particularly as to Mr. Thompson. It seems to me that your letter is based possibly on a misapprehension of conditions here at this plant, and therefore I am taking it on myself to write this so that you may be informed as to the way matters have been here.

As you know, we have received many complaints that the waterproofing caused peeling. We were at first inclined to believe that this was due to the fact that, as you know, some of the Eastman stock was peeling anyhow, and of course, the waterproofing being the newest proposition, it was blamed for this peeling. After a great many experiments and tests here, however, all of us are now convinced that the waterproofing applied to N.I. stock does cause peeling, even of emulsion which would otherwise be non-peeling. Our Chemist here has worked out a theory



#2

Mr. W. A. Daniels.

which seems to conform to the conditions as we find them, and this theory is briefly, as I understand it, that the waterproofing dries at a different rate from the emulsion, and has a tendency to lift it on that account. You must appreciate the fact that under these circumstances this Company could not go on waterproofing its films. Such a course would result disastrously both to our films and to the whole waterproofing proposition, in both of which we are interested as much as you are. Our Chemist has found, apparently, a solution of the difficulty, and judging by test pieces which we have run on the machines, is producing a product which absolutely does not peel, and moreover is very helpful to what would otherwise be brittle Eastman stock, and everybody, including Thompson, is working now to make changes which will permit this new method to be used commercially. If it is found that we have solved our difficulties, the waterproofing proposition will be immensely strengthened with the other Manufacturers, because in addition to the advantages which we ~~have~~ know with waterproofing, we will be able to point out that it will relieve them of many of their difficulties in regard to the Eastman stock.

It does not seem to me that your proposition, which I gather from letters which you have written to Mr. Thompson and which he has shown me, that the Waterproofing Company has nothing to do with the poor quality of Eastman

Mr. W.A. Daniels.

stock and that you should not attempt to overcome any difficulties with it, is, at least, open to question. Granted that the Eastman stock is defective, it is a pretty hard thing to induce a manufacturer to go on using a process which accentuates those difficulties, and on the other hand, it would be an extremely easy proposition to induce him to use a process which diminishes the difficulties. I think you should also realize that this Company has a considerable amount of money at stake in the waterproofing proposition, and in everything that has been done here that fact has been taken into consideration. In other words, this Company is working toward the success of the waterproofing proposition along lines which we are directly in touch with the process as to its working out here, believe to be the right ones. It seems to me personally that everything points now to success, and it is only going to be a matter of possibly a few weeks when all of the troubles will be solved. Consequently, it seems very unfortunate at this time to raise any unnecessary questions such as the relations of Thompson to the Waterproofing Company. If the process is not a success with N.I. film, the mere cutting down of salaries of yourself and Thompson will not help the proposition.

I gather from one paragraph in your letter, above referred to, that you have in mind making a formal demand on Mr. Spoor to take his machines. I hope that you will

Mr. W. A. Daniels.

do nothing which will in any way tend to irritate Mr. Spoor or to give him the impression that you are going to jam these machines into his plants willynilly. We might as well conceive between ourselves that there have been many difficulties which have been laid at the door of waterproofed films, and some of them probably justly so, and I think that you will not strengthen your position with the other Manufacturers if you take the position that you are going to enforce your contracts in spite of the fact that Spoor may have come to the conclusion that the waterproofing is not a good thing. In other words, it seems to me that under all the circumstances, diplomacy is the thing to be used, and moreover, I certainly think that nothing should be done until we have completed our experiments and arrangements here, which as I said before, will probably be in a very few weeks.

All of the above is written on my personal responsibility and without consultation with Mr. Dyer and merely express my personal views in the hope that a plain statement from me, who, I think you will realize, has more than a friendly interest in your proposition, would tend to allay the apparent mental stress under which you are now laboring.

Yours very truly,

GFS/ARK.

OFFICERS:  
W. A. DANIELS, President,  
F. E. THOMPSON, Vice-Pres.,  
J. B. BROWN, Secretary,  
F. E. BROWN, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

Feb. 28th, 1910.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. J.

My dear Mr. Scull:-

Much obliged for your long letter of the 26th. Your arguments are so convincing that I must agree with you on the general proposition, but so far as Thompson's expenses are concerned I am still of my former opinion. He has no conception of the value of money, never yet having made a trip for this Company where his expense accounts would balance the money drawn. On present trip there is over \$60.00 on our books charged to him which he can't account for or at least hasn't seen fit to do so up to this date. I realize that this is a small matter, but nevertheless must be watched by someone and logically I am the one. I still think he should voluntarily cut off his expense account while he is in Orange on such a long stay.

I saw Mr. Spoor several hours Saturday. I have not antagonized him by any formal demand. Have an appointment with him at his factory day after tomorrow morning. The only thing that is bothering him is the apathy of the other manufacturers which makes him feel that it will be impossible to get advance prices to cover the waterproofing. He claims to have little or no trouble himself with peeling, but has met the trouble with the product of other manufacturers in his own exchange. He had a Vitagraph film lying on his desk Saturday which was to be returned because of peeling emulsion. He has just discovered that many of his Pathe films which he thought were non-inflammable are on the old style of stock.

Our friend Selig is doing his best to prevent the Theatre Film Supply from making an arrangement with us to waterproof all of their stock. He tells them that it will make their films inflammable and useless if the new proposed City Ordinance should be enacted. Of course this statement about the inflammability of a waterproofed film is easily refuted by test, but I understand that Selig has loaned the Theatre Film Supply ten thousand dollars which of course will have some weight in Aiken's decision.

Also find that Friend Selig's master mechanic and some other employee recently called on our rotary brush maker and wanted to find out about the brushes such as they had made for us. They got very little information or encouragement. Do you suppose this fellow is already starting in to infringe our patents?

Yours very truly,

*Franklin*

TELEPHONE 41222-434.

OFFICERS:  
W. DANIEL, President,  
F. B. THOMPSON, Vice-Pres.,  
S. BARBER, Secretary,  
F. H. KARRICK, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4600 WEST ADAMS ST.

CHICAGO.

March 7th, 1910.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

Dear Mr. Scull:-

I am in receipt of your 6th and the two points which you picked out in the proposed weekly letter are the very ones that I was anxious about. I agree with you fully as to what a sensitive man like "Friend Selig" might think of it (I came very near saying sensible man; I am glad I did not). I am pleased to get a conservative opinion regarding the new sising for I was led to believe from Thompson's letters that peeling would hereafter be an absolute impossibility. Knowing Thompson's optimism as I did I of course put some salt on his statements, but still I think they left me with an exaggerated opinion.

(for repairs)  
I took our measuring machine into Selig's last week and used the occasion to try and talk to him, but "Brother Gus" who took my card in said "That Mr. Selig was too busy all last week but if I would come in next week (this) he would talk with me", so of course I am going in.

There can be no question about the peeling of emulsion outside of your establishment. I understand through Spoor that Selig returned 150,000 feet to Eastman. Saw a film in the Vitagraph office a few days ago, the last section of "The Life of Moses" that was peeled so that it would not be used.

We have today received a letter from the Eastman Kodak Company of which the enclosed is a copy; also enclose copy of my reply.

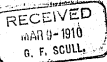
We received a check today from Lyman H. Howe for \$209.80, but for all this I want to get the account of the Edison people straightened up at the earliest opportunity. There must be quite a little sum which we owe them for machine work which I understand is now completed and the sooner the matter is adjusted the better it will be all around.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

W. Daniel

Pres.



Chicago, March 17, 1910

Mr. George F. Soull,  
Edison Mfg. Co.,  
Orange, N. J.

Dear Mr. Soull,-

I arrived home in fair shape and on Monday went into session with Mr. Daniels. He was pretty wild all day and could not talk very rational. Nothing but his petty grievances against me. We thrashed those out pretty thoroughly. He demanded formula for the Edison sizing. I did not give it to him partly on account of the way he demanded it and because I had promised Mr. Dyer not to divulge it to anyone until Mr. Dyer had given it to Mr. Spoor. I do not think Mr. Dyer meant for me to keep it from Mr. Daniels but he has no use for it and could not use it if he had it. He has made a great stew about this. I told him about my promise to Mr. Dyer, but no use, he is blind to reason. I got an inkling today of some of the reasons for his actions towards me. Someone had told him I was out to do him and the stenographer had told him I had got a Dollar from her and never put in any record for it. She added I had taken my wife to a moving picture show. These of course are so plainly stamped a lie that I care nothing for them but the smile and look that went with them showed something beyond.

-2-

At least that is the way it looked to me. I would like to have these books looked over. Mr. Daniels got your letter yesterday morning. It instantly went into his inside pocket, clouds began to gather and the storm finally broke with renewed violence. He does not want to abandon this factory and as far as I can see the only thing he wants to abandon is me. He told me I would get no salary this week as they have no money in the bank. If he could pull this off this way it would very seriously cripple me and he knows I could not last long without an income. I know very well I could get what is coming to me eventually but I would like to know if it were possible for me to draw my salary from Orange, N. J., or if I could get a position with the Edison Company. I feel as though I could make a good success running a camera or in any other capacity that you might have. This is something I would like to know for the future. I am standing pat and will stick to the last gun for a square and honest deal. Mr. D. seems to think he has the whip hand and can carry things in this business just about as he wants to. What he has to gain by his action I cannot see for he has everything to lose.

Kindly let me hear from you. Address me to

331 North Park Ave., Austin, Ill.

Yours truly,

*F.B. Thompson*

March 19, 1910.

Mr. W. A. Daniels,  
National Waterproof Film Company,  
4200 West Adams Street,  
Chicago, Ill.

My dear Mr. Daniels:-

Yours of the 15th inst. has been received by me. I am sure that I cannot give you what you may deem an acceptable answer to queries as regards the irregularity in the coating of reels, unless the suggestion which Mr. Thompson gave you that our work of printing is so far behind, is sufficient. This reason undoubtedly is true, but it is also true that it is not the sole reason for the failure to coat. As a matter of fact, one of the exchanges, (the Galumet) I am informed, does not wish to have its films waterproofed. In addition, the system of coating has not, to my mind, been thoroughly broken in in this factory so as to be made a regular part of the work. There has been so much changing and experimentation that the work is carried on very slowly and requires what I consider an unconsignable amount of labor in the coating room. As time passes and the small details in the system are worked out, it is possible that the number



#2

Mr. W. A. Daniels,

of employees can be cut down and the work speeded, but since the product to which the coating is applied is so valuable and any accident to it during the process of coating involves so much trouble and delay, in addition to the expense, we cannot afford to go at the thing in a slap-dash fashion. I think that I ought to call your attention again to something I did in a former letter, and that is that this company is as intensely interested in the success of the proposition as you are. The installation of the whole system here has been a source of considerable worryment to both Mr. Dyer and myself as has been your non-success in inducing other Manufacturers to take up waterproofing. I fully appreciate that there are reasonable explanations for all of these things. I make these statements because your letter appears to me to be rather fault-finding, and in view of the condition of affairs, it seems to me that neither party can afford to take any such attitude in regard to the other.

Your bill in regard to royalties was received and I have started it on its journey through the Accounting Department. The amount will probably be offset for work done for your Company here. I have taken the liberty to add to the bill enough language to explain the item which it really covers.

Yours very truly,

GFB/ARK.

Assistant to Vice-President.

March 22, 1910

Mr. W. A. Daniels,  
c/o Hotel Knickerbocker,  
New York, N.Y.

My dear Mr. Daniels:-

Your letter to Mr. Dyer appears to  
me to be satisfactory.

I am returning by the messenger the strip of film  
which you ask for. Inquiry today reveals the fact that  
waterproofing is again being held up more or less here be-  
cause of the "sweating", of which I spoke yesterday. The  
factory is still convinced that this is due to mechanical  
causes in the application of the sizing, which will be  
overcome as soon as the sizing machine is re-arranged some-  
what to apply the sizing uniformly and without excess. You  
will note from the sample herewith that this sweating does  
not occur always.

Yours very truly,

GFB/ANK.

Assistant to Vice-President.

TELEPHONE 435226-28.

OFFICERS:  
W. A. DAVIS, President  
F. B. THOMPSON, Vice-Pres.  
S. S. BARNES, Secretary  
F. H. BABCOCK, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4350-4352 WEST ADAMS ST.

CHICAGO.

March 26th, 1910.

George F. Scull, Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. J.

My dear Mr. Scull:-

Arrived home this morning. Mr. Thompson is perfecting plans by which he will be in Orange on the 4th prox.

Found I was too late to get the Lubin Agency as he just completed an arrangement, turning the agency over to a Mr. Fulton. Fulton was formerly employed by Roebuck and is in reality the same man that has sold the Lubin films which have been sold. He is a little hunch back and I understand not popular with exchanges. Mr. Singhi told me that under the circumstances he would have to give Fulton a chance but if he fell down he would be very glad to take the matter up with me. I find the commission paid is 1/2% per foot, but even at this I believe it would be a good plan to take the agency and waterproof all the releases we sold. Mr. Singhi was very much interested in the idea. Mr. Lubin said that he would be ready to negotiate for waterproofing all of his films when his new plant was finished. Owing to the recent strikes this will be delayed until September and possibly longer.

Mr. Berst is in the city but I have not seen him.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis* Pres.



OFFICES:  
W.A. DANIELS, President,  
S.B. THOMPSON, Cashier,  
S. MARSH, Secretary,  
C. MARSH, Treasurer.

## NATIONAL WATERPROOF FILM CO.

CAPITAL: \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

TELEPHONE HOBBS 694.

*Copies*

*Chicago Mar 30-10*

*Mr Frank K. Lyon V. Pres.*

*Edison Mfg. Co. Orange N.J.*

*Dissolve three (3) ounces gum camphor in  
one (1) gallon amyl acetate then add  
six (6) ounces soluble cotton. Agitate  
thoroughly, set and filter until free  
from fibre*

*W.A. Daniels*

March 30, 1910.

Mr. W. A. Daniels,  
c/o National Waterproof Film Co.,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Daniels:-

Mr. Dyer has received today your telegram in answer to his of this morning asking for the composition of the waterproofing compound. As indicated in the telegram, we are still being bothered by the white spots as shown on the sample enclosed. Dr. Tessle~~er~~, after proving that his sizing solution was not the cause, which he did by waterproofing a film without any sizing whatever, guessed that possibly some of the chemicals of your solution were being precipitated and for this reason Mr. Dyer asked for the formula, so that Dr. Tessle~~er~~ would not be working in the dark. Since wiring this morning, however, we found that the solution was badly clouded by a heavy white precipitate. A new tank of solution was then opened and I have just seen a film coated with it, which was absolutely perfect. Of course, we have had so many ups and downs in this matter that it is unsafe to predict, but it seems now that one of two things is the trou-

#2

Mr W. A. Daniels.

ble, first, either the solution in some of the tanks which you are sending us is not properly made, or second, that the solution is liable to change or de-composition after the tanks are opened and we begin using the solution. Mr. Jamison is going right ahead now coating with the solution from this new tank, and we will, of course, watch it very closely and if any trouble develops from using the solution from this new tank, it will show pretty conclusively that the first cause above is the source of our trouble. Samples from the tank which was being used up to today and the tank which has just been opened, show a very marked difference in color and in the clouded condition of the solution, the solution of the old tank being yellow and cloudy, while that of the new tank is perfectly clear and almost white.

It is very unfortunate that we had not corrected this trouble before Mr. Spoor came on. I talked with him over the wire yesterday and did not dare mention the matter of waterproofing to him in view of this situation, and he, in turn, said nothing whatever about it. Mr. Spoor is returning to Chicago this afternoon so that it is impossible to get him out here in view of the changed conditions, and have Mr. Dyer talk with him.

I have yours of the 28th inst. and will see that our check is sent immediately if it has not already gone.

#3

Mr W. A. Daniels.

So far as any new contract is concerned, I think you should arrange it so that the contract will be in force a year at least before the licensee has a right to withdraw. The 20th of March, therefore, is not the critical date so long as you see to it that the year is properly advanced. That is to say, any contract made between now and next March should give the right of renewal on March 20th, 1912.

Yours very truly,

GFG/ARK.

Assistant to Vice-President.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER  
PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.  
CHICAGO.

TELEPHONE REDDIE 634.

March 30th, 1910.

Mr. Frank L. Dyer,

Orange, N. J.

Dear Sir:-

I am in receipt of your telegram this day, reading "Films still spotting even when no sizing used. Wire formula waterproof compound for use. Chemist getting at bottom of trouble." This information is simply unaccountable. We have coated hundreds of reels of both H. I. and inflammable without a sign of this spotting. I wired you the formula as requested.

Also sent you a second telegram asking if you will please hasten payment of our account for the reason that we must have money by Saturday. Mr. Thompson is planning to get away then and his finances are in such shape that the Waterproof Company will have to give him \$50.00 to go with.

Mr. Thompson was through the Spoor plant this week and is very much impressed with the simple and efficient condition of it. One boy running all the perforating machines; three continuous printers doing all the work; titles joined to negatives making up 250 foot lengths so that a completed film contains but four or five joints; wire developing drums by which the development is easily ascertained by an electric light put in the center. He has thought out a plan which he will present to you for simplifying your film department without antagonizing the present management and to the end that all of your output can be satisfactorily waterproofed according to original intent.

I presume ere this you have seen Mr. Spoor who is now East and I

*Dwyer*

*250 foot  
3/31/10  
Spoor*



TELEPHONE REDUCED.

OFFICES:  
W.A. DAVIS, President,  
E. S. THOMPSON, Vice-Pres.,  
S. BARRETT, Secretary,  
F. R. BARRETT, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4000-4002 WEST ADAMS ST.

CHICAGO.

Mr. F. L. D. --#2

hope as a result he will want his machinery set up immediately.

We had a call this week from Mr. Vic. Smith of the Vitagraph Company who came to Chicago to see Mr. John Rock take his third degree in Masonry. He also brought congratulations and a 3 1/2K diamond ring from the Senior Rock.

Mr. Berst has been in the City for several days but returns this P.M.. Mr. Montagu, his Chicago representative, goes East also, his place being taken here by a new man.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis* Pres.

TELEPHONE KEDJIE 680.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

April 2nd, 1910.

Geo. F. Soull-Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

Since writing you this morning I picked up the streaked film which was enclosed in your last letter, and unconsciously began rubbing it with my thumb and finger. As a result it seemed as though the streaks had disappeared which I should think indicated that the trouble was not in the coating but on it. I return the sample in question.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.

*Sample enclosed*

TELEPHONE REDDERS.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER  
PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

April 2nd, 1910.

Mr. Geo. F. Scull, Asst. to Vice-Pres.,  
Edison Manufacturing Company,  
Orange, N. J.

Dear Sir:-

Replying to your favor of the 30th: From what you say about the new tank of solution acting perfectly, it is evident that some chemical reaction or foreign substance has got into the objectionable tank. Without knowing the number of the tank we are unable to trace when it was made, but it appears to us that it must have been the last lot at the time we made twelve barrels all from material purchased at one time so it would not seem possible that one barrel would react and another would not. You know these tanks are tinned inside and out and it may be that the tinning is off on the inside of the <sup>one with</sup> poor solution and that rust made have formed and discolored it as well as effecting the chemical composition. However, Mr. Thompson will thoroughly investigate this matter early next week. He is due to arrive in Orange at 6:45 Monday morning.

I am very sorry that Mr. Dyer did not get a chance to talk with Mr. Spoor about waterproofing, as I believe it was one of the important reasons for his going to New York.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.

TELEPHONE KEDIC 694.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4800-4802 WEST ADAMS ST.

CHICAGO.

April 2nd, 1910.

Geo. F. Scull, Asst. to Vice-Pres.,  
Edison Manufacturing Co.,  
Orange, N. J.

Dear Sir:-

Referring to the remarks about money in your March 30th, will say that we have received this morning \$600.00 on account. This will help some, but will not enable us to pay our bills. Since my return from New York I have advanced the Company \$798.71.

We sent you a statement yesterday showing that you owe us \$2494.97. According to our records we owe you \$572.14, leaving \$1922.83, and giving you credit for the \$600.00 received today leaves \$1322.83 due us which I hope you will be able to send us this week without fail.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis* Pres.

April 6, 1910

Mr. W. A. Daniels, Waterproof Film Co.,  
c/o National 4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Daniels:-

Your three letters of April 2nd are at hand. It so happens that the Company just at this time is tied up for the want of ready cash and that was the reason why only a part of your account was sent you. I doubt very much whether the remainder of your account will be sent you this week or not, but I shall do my best.

The film coating ~~for~~<sup>on</sup> the new solution is going along nicely now, and Thompson has started in to find out if possibly what is the cause of the clouding of the other tanks. We were aware that this discoloration could be wiped off, and we also found that on re-coating the white spots could be re-dissolved, but of course this latter method of treatment was impracticable, and even though the spots would wipe off, we were a bit uncertain whether or not they would reappear.

I had a chance to talk to Mr. Spoor the day he left New York for Chicago, which was after we had started

#2

Mr. W. A. Daniels.

coating with the solution from the new tank. He brought up the question of waterproofing himself, and as you have said, his chief difficulty seems to be over the price. Mr. Dyer and I have given considerable thought to the matter of some kind of a proposition which you can make to the Manufacturers, including Spoor and when Mr. Dyer arrives at some definite conclusion, I will advise you.

Yours very truly,

GFS/ARK.

Assistant to Vice-President.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER  
PROCESS AND MACHINERY PATENTS PENDING  
4300-4802 WEST ADAMS ST.  
CHICAGO.

April 9th, 1910.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

Replying to your favor of the 6th? We are very sorry to hear of any stringency which prevents your sending us the balance of our account. Of course this is the end of the week and as we have not heard from you must now look forward to hearing next week. We must certainly get something, if not the balance of the account, for our next Saturday's pay roll and I want to ask if you will not see that at least another \$600.00 is sent to us. The 2Q washing machines at Bell and Howell are practically finished and this means a debt of over a thousand dollars when they are delivered. We have less than \$50.00 in the bank and at best will have the hardest kind of sledding to tide over until the first of the month when we are depending upon the \$1200.00 for April account. By the way, how do you propose to handle this? Shall we send you a bill on account of royalty or will you send us the money without any bill and use our receipt on account as your voucher.

I note what you say regarding talk with Mr. Spoor on waterproofing and shall be glad to hear from you further with regard to it. I believe that every one in Spoor's establishment is heartily in favor of the process and that they lose no opportunity to urge him to get started.

We have quite a few orders for waterproofing the "Roosevelt-African" pictures and expect to be quite busy next week. Among other orders we have one for Kleine Chicago and Kleine Denver, with Kleine of New York to hear from.

We had two old reels this week to wash for the Pacific Coast Borax Company. One of these they state has been run two thousand times. After it was washed with the exception of perhaps fifty or seventy five feet on each end you would have declared it to be a brand new film. It is incredible that the film has been run the number of times they are willing to make affidavit.

We have a very nice letter from Pathe Freres this morning of which the enclosed is a copy. We consider it quite a boost to our integrity when they will entrust the shipment of such valuable films to us.

Yours very truly,  
NATIONAL WATERPROOF FILM COMPANY

*H. J. Scull* Pres.

TELEPHONE KIDDEEN.

OFFICERS:  
W. A. BARTON, President,  
F. E. THOMPSON, Vice-Pres.,  
G. F. SCULL, Secretary,  
F. E. BARTON, Treasurer.



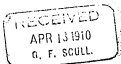
## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4800-4808 WEST ADAMS ST.

CHICAGO.



April 15th, 1910.

Geo. F. Scull, Asst. to Vice-Pres.,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

We wish to acknowledge receipt of yours of the 11th and thank you for your information regarding the stock used on the "Roosevelt" pictures. We had quite a number of orders for waterproofing these films and Pathe Freres were very kind in sending to us in advance. A number of our orders did not reach them, however, until after they had shipped direct to the exchanges.

We had an order from Kleine for waterproofing a set for their Denver and one for their Chicago office but it seems that Mr. Kleine who is in New York advised Mr. Beist to ignore the order to ship these to us and to send them to his Chicago office, so up to the present time we have not received these and it looks as though we never would.

We have recently cleaned up some films waterproofed a year ago for the Pacific Coast Borax Company and one of these has a record of having been run two thousand times. It is in such excellent condition that we are going to try to bring it to the attention of Mr. Selig who made the film. This effort is to be made upon the return of Mr. Selig from New York. It certainly ought to interest him.

We only have money enough for our tomorrow's reduced pay roll not having received any remittance this week to date from the Edison Manufacturing Company. We don't like to harp on this one string but we should consider it a great favor if your people would either send us a check for the balance of our account or send us a note for thirty or sixty days that we could discount. Under such a settlement we are sure the Edison Company would be willing to pay the cost.

A first run Biograph film went to pieces in a half a day in one of the theatres here on Madison Street and was returned to the Theatre Film Supply Company as absolutely worthless. It was a fortunate thing that this was not a waterproofed film, otherwise we should have heard that waterproofing was responsible.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Barton* Pres.



TELEPHONE KIDZEE 664.

OFFICERS:  
H. A. BELL, President,  
F. B. THOMPSON, Vice-Pres.,  
G. B. SPUR, Secretary,  
F. R. RABSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-4302 WEST ADAMS ST.

CHICAGO.

April 21st, 1910.

Geo. F. Soull, Asst. to Vice-Pres.,

Maison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

We are in receipt of your telegram of the 20th, reading, "Check mailed last night". We also want to say that check was received this morning and that it is a great relief.

I was in a bad frame of mind yesterday regarding it and other film matters. It seems that the "Roosevelt" pictures (2 sets) for the Clune Film Exchange which we waterproofed failed to reach Los Angeles until two days after release. We have been chasing the Express Company the whole week to trace these goods. We received the films on the afternoon of the 11th, shipped at noon on the 12th and hired a special wagon to take the goods to the Express Company's office in our section of the city. We obtained the usual receipt and the goods went to the Chicago & Northwestern Depot (down town) that afternoon. They were received in but checked out "short", so the Express Company could not tell by what route they had gone or if at all. We felt the goods had been stolen but we find now that they went to Ogden, Utah, by the American and were transferred there to Wells Fargo, reaching Clune two days late as above stated. Clune is preparing affidavits with which to get after the express company for his loss which he claims will be about one thousand dollars. He must have had some good contracts for showing these films if two sets would have brought him one thousand dollars in two days. However, it is not for us to question this, but I doubt whether he will ever collect so much from the Express Company.

I presume that by this time Mr. Gillson has called on you and that he is today in Washington.

Mr. Howell of Bell & Howell has also gone East taking with him for demonstration one of his perforating machines and one of his continuous printers such as are used by Mr. Spoor. Mr. Howell thinks that he can convince you that much of your trouble of films going to pieces can be traced to irregular perforations. He also thinks that he has a perfect printing machine which I know nothing about, but Mr. Thompson was very much pleased with it when he visited the Spoor plant.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Soull* Pres.

OFFICERS:  
W. A. BARNES, President,  
J. B. THOMPSON, Vice-Pres.,  
S. BARBER, Secretary,  
F. H. BARBER, Treasurer.



# NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-1802 WEST ADAMS ST.

CHICAGO.

May 11th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.

*man*

Dear Sir:-

I am in receipt of your favor of the 9th and of course am very much interested to hear such good reports from waterproof films. I hear through Mr. Thompson that the Vitagraph Exchange have also reinstated waterproof films and reported that hereafter they did not want any other kind. I attribute this in part to Vic. Smith who paid us a visit recently. Neither these people nor Kleine have a washing machine. If a waterproof film is in remarkably good shape as stated by Kleine of New York it would be in much better shape if it was run through our washer once a week.

We had quite a meeting of Independents here last week which I suppose you have already heard about.

We are doing very little business but are still waiting for developments from the General Film Company.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Barnes* Pres.



Chicago, May 21, '10.

Mr. F. L. Dyer,  
c/o Nat'l Phono. Co.,  
Orange, N. J.

*Ans 5/26/10*

Dear Mr. Dyer:-

The letter which I enclose is written at the suggestions of Mr. Daniels, with the understanding that it is in accordance with a talk you had with Mr. Daniels.

If this is not along the lines you wish, kindly advise and I will make such changes as you suggest.

Yours very truly,

*Fred.*

FKB-278





We have the same patents in Germany and England with notice of allowance in Germany of the drying machine.

FIRST: An artichel patent allowed not issued.

THIRD: Drying machine issued.

FOURTH: Process patent allowed not issued.

None of our applications anywhere stand rejected; so we have reason to believe in due time all will issue.

If you are interested in this offer and need any further information for its proper presentation to your Company please let me hear from you promptly.

Meanwhile, I remain

Yours very truly,

*AK Babsa*

PLEASE WRITE YOUR REPLY ON THE OTHER SIDE.  
WHEN WRITING ALWAYS USE YOUR CORRESPONDENCE NUMBER.

EDISON MANUFACTURING COMPANY

May 26, 1910.

Mr. Fred Babson,  
Marshall Boulevard & California Ave.,  
Chicago, Ill.

My dear Sir:-

Mr. Dyer duly received yours of the 21st inst enclosing a letter addressed to him as President of the Motion Picture Patents Company, and wished me to state to you that this letter covers exactly what he wanted.

On further discussion we have concluded that the present would not be the psychological moment in which to spring this proposition. Unfortunately because of difficulties which we have experienced in coating non-inflammable film, the proposition has received something of a set back in the minds of the trade, and it will probably be sometime before the confidence of the trade is restored, as we hope it will be now that we believe we have overcome all of the bad effects which we were getting.

Yours very truly,

GFS/ARK.

Assistant General Manager.

May 26, 1910.

Mr. W. A. Daniels,  
4200 West Adams Street,  
Chicago, Ill.

Dear Mr. Daniels:-

In accordance with conversations which Mr. Dyer had with you, Mr. Babson has written Mr. Dyer a letter proposing to sell out the whole waterproofing proposition to the Patents Company for \$50,000. Since his return, we have discussed the matter at considerable length and decided that the present is not the best time in which to spring the proposition on the Manufacturers. From what I can gather not one of them is sufficiently impressed with the quality of waterproofed film to make them willing to consider the matter at all. This indifference may be overcome after some months, if we continue to turn out during a considerable period waterproofed film which is unquestionably good, and as you know, unfortunately, in the past we have not been able to do this.

I also believe that if we can show that we have an application allowed, or a patent granted covering the waterproofed film as an article, we will be in a much stronger

EDISON MANUFACTURING COMPANY

#2

Mr. W. A. Daniels.

position than we are now with simply an application pending for it with no broad claims allowed. I have written Messrs. Gillson & Gillson in regard to this application and have not heard from them. It was on this application, you will recall, that Mr. Gillson went to Washington for us.

Yours very truly,

GWS/ARK.

Assistant General Manager.



TELEPHONE KEDIE 69.

OFFICERS:  
W. BABSON, President,  
F. THOMPSON, Vice-Pres.,  
S. BABSON, Secretary,  
F. BABSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

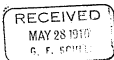
CHICAGO.

May 26th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Mfg. Co.,

Orange, N. J.



Dear Sir:-

May 17th Mr. Babson sent me a copy of a letter he proposed sending to Mr. Dyer. In making suggestions for changes I specified the condition of our patents both in this country and Europe. I understand today that Mr. Babson copied my letter verbatim.

I wish to make a correction regarding the Article patent "allowed but not issued" in this country. Until I saw Mr. Gillson today I supposed that if the revised application was not allowed we had a sure thing on going back and taking out the Article patent as originally applied for and allowed. But Mr. Gillson tells me that while this is the usual course, still the opening up of an old application allowed is sometimes followed by rejection. Since May 17 we have notice of allowance of our English patent on the drying machine.

We are doing absolutely nothing in the way of business here; the Independent trade having dropped off since we withdrew our advertising from the trade papers and the license business has not recovered from its apprehension as to what the General Film Company may do.

Some of our washing machines that were out on rental are being returned, the reasons seem to be all about like the Western whose letter I enclose you. Howard of Boston and Flinton of the Yale have both paid for their machines in full, but these are the only two who have preferred owning the machines to renting them. We still owe \$550.00 to Bell & Howell on washing machines. I shall pay this as soon as I receive the next remittance from you.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. Babson* Pres.

TELEPHONE KENEDEN.

OFFICERS:  
W. A. BARRETT, President,  
F. E. THOMPSON, Vice-pres.,  
G. B. BARRETT, Secretary,  
F. H. BARRETT, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-4302 WEST ADAMS ST.

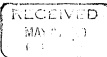
CHICAGO.

May 27th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.



Dear Sir:-

Mr. Thompson sends us a list of 21 exchanges who are receiving films not waterproofed from you. In this list we note the Calumet Film Exchange of Chicago. Mr. Freuler who owns this exchange also owns the Western in Milwaukee. I sent you a letter from him yesterday. Mr. Freuler has told us a number of times that he did not think waterproofing had anything to do with the Edison films going to pieces. We shall see him Monday in Chicago and endeavor to get him to reinstate the waterproof film with the Calumet.

We are surprised to learn that the Kleine Optical Company of New York City is on this list for Mr. Willis was always an advocate of waterproofing. We are told at the office of the Kleine Optical Company of Chicago that the "Roosevelt in Africa" pictures which we waterproofed for them are still in service and in good condition. This same subject at Spoor's (2 copies) are both in good condition, examined two or three days ago. In fact we have had no complaints whatever of this film having gone to pieces.

We wish to reduce this list of exchanges who are not using waterproofing and to this end have thought about sending out a letter to them as per enclosed, but before doing so wish to submit it to you for approval, correction or condemnation. We certainly do not wish to do anything which would reflect upon the Edison product, but it seems to us that you are as much interested

TELEPHONE HERDICKS.

OFFICERS:  
W. A. DAVIS, President,  
J. B. THOMPSON, Vice-Pres.,  
S. B. BROWN, Secretary,  
F. H. BARNES, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
1200-1202 WEST ADAMS ST.

CHICAGO.

G. F. S.--#2.

as we are to know if films of other manufacturers when waterproofed will  
meet the objections which yours have.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis* Pres.

OFFICERS:  
W. A. THOMPSON, President  
F. B. THOMPSON, Vice-President  
J. B. HARRIS, Secretary  
F. R. HARRIS, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-4302 WEST ADAMS ST.

CHICAGO.

May 26th, 1910.

George F. Scull, Asst. Gen. Mgr.

Edison Mfg. Co.,

Orange, N. J.

RECEIVED  
MAY 31 1910  
G. F. SCULL

Dear Sir:-

I am in receipt of your 26th. Apparently the thing to do is to wait until we hear from Washington regarding the Article patent. In the mean time I want to urge upon you the necessity of radical changes in your sprocket holes. Coming from an outsider this may seem presumptuous, but since so many Edison films prematurely go to pieces and waterproofing is wrongfully blamed for it I have made an exhaustive study to discover the true reason. Everything points to your perforations.

FIRST: It is a mechanical impossibility to perforate more than one thickness of film at a time and make clean holes. The holes so perforated will under microscopic examination be found to have a burred edge which is rough. Such an edge will tear more easily than a clean cut. You can demonstrate this with a piece of paper.

SECOND: Your holes are not spaced correctly by  $5/32$ " to a foot or about one sprocket hole in every two feet of film. This is the reason why every operator will tell you that they have to frame an Edison often more than any other.

THIRD: Your films do not hug the sprocket wheel like the best; they go too far around the wheel and before leaving it get a back pull at "X" (see rough drawing enclosed). This puts an extra strain on the film and lips the sprocket holes. These lips are but the beginning of a tear.

FOURTH: I enclose a correct mathematical calculation for sprocket holes to fit a sprocket wheel with diameter of  $15/16$ .

I am not selling perforating machines, but I would like to see you put in and use enough of Bell & Howell's to convince yourselves that this is the one lame spot in the Edison production of moving picture films. I believe that Bell & Howell will guarantee you satisfactory results and that the machines will pay for themselves in 30 days.

You must know as well as I do that waterproofing can be in no way responsible for all the trouble you have had, for as stated in the Western Film Exchange letter (I sent you this week) your films go to pieces whether they are waterproofed or not. Of course we hear some complaints about other makes but they are not so frequent and besides this we are not so much interested. We have never yet heard a complaint on Pathé, Essanay or Selig films waterproofed and we have done many of the first and second.

TELEPHONE, KEDZIE BR.

OFFICERS:  
W. A. DANIELS, President,  
F. B. THOMPSON, Vice-Pres.,  
G. HARRIS, Secretary,  
F. R. BASSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

C. F. S.--#2.

I hope you will accept this letter in the kindly spirit that it is sent and that you will promptly act upon it, otherwise waterproofing will continue to receive undeserved punishment which will knock it out completely.

With best wishes, I remain

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.

[ATTACHMENT]

SUBJECT: MOVING PICTURE FILM PERFORATING GAUGE.

The Bell & Howell Co. hereby desires to show clearly, in the following computation, how we have determined and why we have adopted a standard of 11.968" per 64 holes perforating gauge, assuming that all projecting machines have sprocket wheels with a diameter of  $15/16$ ths, or .9375".

Computation as follows:

Diameter of sprocket, .9375"

Circumference of Sprocket 2.94525"

Now, as films have an average thickness .0065", we must add to the diameter of the sprocket .0065" to determine the pitch diameter, which is .9375 plus .0065" equals .944", P.D. of sprocket.

Pitch circumference is  $3.1416 \times .944 = 2.965704$ ".

Circular Pitch is  $2.965704$ " divided (16, number of teeth) equals .18534815"

Perforating gauge of Howell Perforator being 11.968" per 64 holes.

Average allowance for shrinkage-  $3/32$ " or .0937" per 64 holes is 11.968" minus .0937" equals 11.8743" (shrunken film per 64 holes).

The pitch of the film, or length per hole, is:

$11.8743$ " divided by 64 equals .18553"

Pitch of Sprocket, .18534815"

Pitch of Film, .18553000"

THE BELL & HOWELL COMPANY.

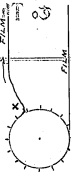
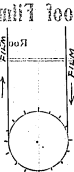
[ATTACHMENT]

OET

Chicago,

U.S. National Weather Service

12072 1971 11 20 11 20 11 20



Best in order

- 1 Palter
- 2 Essayay
- 3 Siliq

Most in order

- 1 Edison
- 2 Kallan
- 3 Vitograph
- 4 Melies
- 5 Lubin
- 6 Biograph

EDISON MANUFACTURING COMPANY.

June 7, 1910

Mr. W. A. Daniels,  
c/o National Waterproof Film Company,  
4200 West Adams Street,  
Chicago, Ill.

Dear Sir:-

I duly received yours of May 26th, 27th and 28th. I do not see how your proposed letter to exchanges not taking Edison waterproofed film can be interpreted in any other way than as a knock to Edison films, and, therefore, cannot approve of the issuance of the letter. The very fact that you disclaim any intention to knock our films, calls attention to the fact that the letter is necessarily very disparaging to our output.

We have heard statements similar to those you make in yours of the 28th ult. with reference to our perforations being faulty. It may be that they are, but from such light as we can get on the subject at this end, we are unable to see why this is so. I enclose two sections of film, one of which was perforated one thickness at a time and the other two thicknesses at a time. I doubt that you can tell which is which. We have tried out this point pretty



#2

Mr. W. A. Daniels.

thoroughly here, and are unable to determine that there is any difference.

Our films are perforated 64 holes to the foot. According to the scientific deduction of Bell & Howell, we should have 64 holes in 11.968 inches. In other words, there is a thirty-second of an inch difference in every 64 holes between our perforations and the Bell & Howell. You will note that their deductions are based on an assumption of an average allowance for shrinkage of  $3/32$  for 64 holes. As an average, this may be all right, but unfortunately, we have never been able to find any two pieces of film shrink alike, and we do not believe that a difference between our perforations and that of Bell & Howell, so far as spacing is concerned, is any difference whatever. You may be correct in the statement that our films do not hug the sprocket wheels properly. If this is so, I do not know the reason. We have attempted to copy the dimensions of the Pathe perforator which seems to have been giving the best results.

We have tried out sections of film on the Bell & Howell perforator and printer and have run them before a mixed audience of men who are capable of intelligently judging, but who had no knowledge as to which prints were made on our machines and which on the Bell & Howell, and practically the unanimous vote under these circumstances

#3

Mr. W. A. Daniels.

was in favor of our prints so far as steadiness on the screen was concerned. I have looked up the matter of the use of the Bell & Howell machines pretty carefully and have not been able to satisfy myself that they would pay for themselves in anything like thirty days. I do not know by what figures you arrive at your conclusions. My own personal opinion is that our films, particularly those waterproofed, have been giving more dissatisfaction, because in our endeavor to take out the brittleness, of which complaint had formerly been made, we have gotten them too soft. This is particularly true of waterproofed film which was released up to about a week ago. Those released from that time on, and waterproofed as they should be, are not so soft. We are also cutting down the amount of glycerin in the unwaterproofed film.

We are receiving very few complaints nowadays from exchanges in reference to our film breaking down, and I cannot believe that this would be the case if our films were so very much worse than any other make in this respect.

I presume that after reading the foregoing you will conclude that we are inclined to be bullheaded and are closing our eyes to a condition which we ought to recognize, but we must be guided by what we believe to be the facts, judging by the whole situation as we see it, rather than by any statements which I know personally, coming from operators, are often based on conclusions reached without very much thought or actual observation.

EDISON MANUFACTURING COMPANY

#4

Mr. W. A. Daniels.

I have looked up the correspondence to which you call my attention in yours of the 4th inst., and find that I was in error in reference to the amount which we should send you, and our Accountant states that \$600 is being sent you today, and payment should be considered as of the first. The other \$600 is to follow on the 16th inst. I do not know how we will eventually have to adjust these payments, because with the number of films which we are now waterproofing the royalties cannot possibly be more than \$600 per month.

Yours very truly,

GFE/ARK.  
Enc.

Assistant General Manager.

TELEPHONE REDDIE 654.

OFFICERS:  
W. A. DANIEL, President,  
J. S. COOPER, Vice-President,  
S. B. BROWN, Secretary,  
F. R. BARSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

June 10th, 1910.

Geo. F. Scull, Asst. gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

Replying to your favor of the 7th:

I agree that facts should govern and one of the most important which confronts us is that the Edison film (waterproofed or not) has less wearing quality than any other. Talking with an Exchange man today he said "That because of this when business grew dull he always cancelled his Edison order first". I am sure he is not the exception and my anxiety to reverse such a condition is my excuse for writing you so plainly.

Neither of the two pieces of film you enclose have clean out perforations so it is difficult to say which has been run double, but it is probably the shorter piece marked "X". In your test of the Bell and Howell perforating machine by which it was decided the pictures were unsteady, were both the negative and positive perforated with their machine? If only the positive the test was unfair for the picture could not have been steady under this condition. The 3/32 "average" allowance for shrinkage which B. & H. use in their calculation should read "Maximum" for 3/32 average would call for some shrinkage in excess which I believe will never occur under proper handling. Inasmuch as neither Pathe nor Selig use Bell & Howell machines it is evident that good perforations do not depend upon using them. But if you should decide to try their perforators (or and printers) they will put them in on a 90 day trial and if they don't serve to reduce the number of complaints and returned film and are not otherwise satisfactory Bell & Howell will remove the machines without charge.

I understand that the Vitagraph Company has a good perforating machine except that it is constantly losing its adjustment; starts out O.K. but cannot maintain it. This may account for some of their films running fine and some going to pieces before release day; this recently happened, the film being so "Shot" by running in the exchange for exhibitors that another copy had to be sent for to rent. This is told to call your attention to a possibility of varying adjustment with your own machines just as a clock sometimes varies a few seconds every hour and finally has to be reset.

I shall be very glad to know that with less glycerine and reduced strength of sizing you can overcome all future trouble, but I must admit some doubt. I believe the closer your sprocket holes approach the Bell & Howell

OFFICERS:  
W. A. DUNN, Secy.  
F. B. THOMPSON, Treas.  
G. A. BROWN, Pres.  
F. C. HARRISON, Exec.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4230-4232 WEST ADAMS ST.

CHICAGO.

June 10th, 1910.

G. F. S.--#2.

exact calculation the less you will have the film riding past the center on the average sprocket wheel. At any rate if your sprocket holes are correct Spoor's must be wrong for he uses B. & H. measurements exactly.

From what you say about our royalties, I judge your business has fallen off considerably - I hope this does not account for the "Fewer complaints lately" which you mention.

I expect to go East the latter part of this month when I shall be glad to discuss matters with you further in hopes that it may lead to our mutual advantage.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*H. A. Daniels* Pres.

TELEPHONE HERDZ 629.

OFFICERS:  
W. A. DAVIS, President  
J. E. THOMPSON, Vice-Pres.  
S. B. BARNES, Secretary  
F. R. BARNES, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
1200-1202 WEST ADAMS ST.

CHICAGO.

June 13th, 1910.

Geo. F. Scull, Asst. Gen. Mfg.

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

As you know the character of Mr. Singhi of the Lubin Company better than I do, I want to ask your advice about another effort to introduce our machinery in their plant. The last time I saw the gentleman he stated that as soon as the new factory was finished they would put in our coating machinery provided we could come to terms on the contract. There was no question with him as to the price and he stated that he was willing to leave out the clause in the last contract about export films, but he would insist upon the privilege of stopping waterproofing if he found it was hurting his business. Otherwise he knew of nothing in the contract which would be necessary to change.

I thought that when I saw him again I would offer to put machinery in for 90 days without any charge except for solution, which time would be sufficient for him to know whether it was hurting his business or not, and then have our contract <sup>dated</sup> from the expiration of the three months.

We have three drying machines here of the old style which could be rebuilt at an expense of about one thousand dollars. We should have to buy three new coating machines or use the three we have here which were built for Spoor. This would leave us one drying machine and one coater here which will take care of such work as we are getting at present.

After Spoor returns I want to see him and find out just what he proposes, and if he declines absolutely to start waterproofing we could use his machines in Philadelphia without any extra expense.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*H. A. Daniels* Pres.

OFFICERS  
W. DANIELS, President  
T. B. THOMPSON, Vice  
J. BARRETT, Secretary  
F. J. BARRETT, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-4302 WEST ADAMS ST.

CHICAGO.

TELEPHONE HODICK 630.

June 29th, 1910.

Geo. F. Soull, Asst. Gen. Mgr.,

Eaton Manufacturing Co.,

Orange, N. J.

Dear Sir:-

There is no exchange which has gone into our proposition as intelligently as the Theatre Film Supply Company here. They have for some months been anxious to contract with us to waterproof all of their purchases under an exclusive agreement for a certain territory. The forecast of what the General Film Company might do has alone prevented the fruition of this plan. Now that the expected has come to pass and the Theatre Film Supply Company is no longer in existence the proposition has been pushed along by them to the Vice-President of the G. F. Co. They argue that if it was a good thing for the Theatre Film Supply Company it is as good or better for the General Film Company, and Mr. Kleine has promised to take the matter up at the earliest opportunity. I give you this advance information so that you may help the thing along if you will.

Waterproofed films, properly cared for, are "Sure money" for any exchange and now that the manufacturers are directly interested in rental profits as well as in manufacturing, it should not be difficult for them to see the advantages of clean and lasting films. Every day the public and exhibitors are growing towards cleaner pictures. The popular mirror screen so magnifies rain that owners must have clean films or discard the mirrors.

The exclusive feature of waterproofing should be worth much in view of some opposition to the G. F. which we hear is in the air. With a general arrangement with the General, we could, with this factory and another East, take care of all the G. F. Co. purchases.

The price we had stated to the Theatre Film was \$3.50 per reel, and free installation of washing machines (motors excepted) sufficient to wash all films promptly. This leads to the idea that the waterproof patents would not be a bad thing for the G. F. to own, especially might they come in handy some day to silence possible cries of "illegal monopoly," "restraint of trade" and "Sherman act," etc. Inasmuch as they are in a purchasing mood just now, they might like to get a five hundred thousand dollar proposition like ours for one hundred thousand dollars or so, even if they pay for it in good 7% preferred stock.

I don't want to say any more about sprocket holes, but I quote from a letter received this week from a licensed exchange:



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4820-4822 WEST ADAMS ST.

CHICAGO.

U. F. S.--#2.

"We find that when a Solig film breaks on us there is a straight break through the partition between the sprocket holes and inasmuch as it is usually but a single section of a reel, we account for this as its being defective stock. With the Edison however, it seems as though the sprocket teeth cut right into the film and if only casually inspected you would never notice there was anything wrong, but when put in a machine it is impossible to keep the picture in frame on account of the teeth engaging in the sprocket holes and then slipping into the torn parts, making a very unsteady picture and requiring the film to be mended in two or three places before it can be run through again."

I understand that Mr. Dyer was here Monday, headed towards Reno, Nevada, but of course on business only. I am sure he wouldn't look at a prize fight any more than you or I would (unless we had good front seats).

Hoping to see you about the 10th of next month, I remain

Yours truly,

NATIONAL WATERPROOF FILM COMPANY

*H. A. Quill* Pres.



OFFICERS:  
W. A. DAVIS, President,  
F. S. THOMPSON, Vice-Pres.,  
S. B. BROWN, Secretary,  
F. S. BROWN, Treasurer.



# NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

July 8th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

We wrote the Edison Manufacturing Company under date of July 2nd as per enclosed copy. We credited you with all that the chemists credited us, but instead of changing the number of gallons we changed the price per gallon which brought the same result.

I shall leave here tomorrow and be in New York Tuesday night or Wednesday morning. I am going via the Steamer "Northland" to Buffalo, taking three nights and two days to reach there. I am going to stay at the Hotel Belmont this time for my experience has been that it is the coolest hotel in New York if you can get a room high up on the East side.

I shall be glad to see you Wednesday either in Orange or New York as is most convenient. You might drop me a letter on this point to the Hotel Belmont.

yours truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Davis*

Pres.

P. S. Just received notice from Gillson that our German patent application on Film Drying Machine has been allowed and will issue as #223954.

TELEPHONE HEDDIE 684.

OFFICERS:  
W. A. BARTON, President,  
F. B. TROTHMAN, Vice-pres.,  
G. BARON, Secretary,  
F. H. BASSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4300-4302 WEST ADAMS ST.

CHICAGO.

July 28th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

Upon my return to Chicago I saw Mr. Aiken of the Theatre Film Supply Company Monday morning. He seemed very glad to hear of the arrangement as I reported it, but said he had no advices from Mr. Waters or Mr. Kennedy regarding it. However, on the strength of what I told him he made arrangements by having built at once a gallery floor to take care of five of our washing machines in his place. This work, however, is <sup>now</sup> held up pending some word from head quarters.

As nothing has been heard up to noon this day, I wired you as follows which I now confirm:-

"Aiken not advised of our arrangement with Kennedy for waterproofing. I wired Kennedy Monday but have no reply. Please investigate delay."

I also enclose you a copy of my telegram of Monday to Mr. Kennedy. I presume the whole delay is occasioned by Mr. Kennedy being called away from the city.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Barton* Pres.

[ENCLOSURE]

Form No. 2.

**THE WESTERN UNION TELEGRAPH COMPANY.**

**24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
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**SEND** the following message subject to the terms on back hereof, which are hereby agreed to. July 25th, 1910 190

To J. J. Kennedy.

General Film Co.,

8 Fifth Ave., New York, N. Y.

Will you please instruct Mr. Aiken as to our arrangement for waterproofing his new releases.

E. A. Daniels.

**COPIES**

READ THE NOTICE AND AGREEMENT ON BACK.

OFFICERS:  
W. A. DANIELS, President,  
F. B. THOMPSON, Vice-Pres.,  
S. BRADLEY, Secretary,  
F. H. WATSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4280-4282 WEST ADAMS ST.

CHICAGO.

TELEPHONE REDDIE 684.

Aug. 3rd, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.

Dear Sir:-

I wired you this day as follows which I now confirm:-

"Aiken still without instructions regarding waterproofing. What is the trouble. Answer."

I suppose there is some very good reason for this delay, but not being able to understand it you can imagine that I am growing very anxious. Can it be possible that we have another Spoor contract to contend with? Mr. Aiken is just as anxious to begin waterproofing as I am and is just as far from being able to understand the delay.

Yours truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.

EDISON MANUFACTURING COMPANY

G.P.S.

Aug. 3, 1910.

Mr. W. A. Daniels,

National Waterproof Film Co.

4200 West Adams St.,

Chicago, Ill.

My dear Mr. Daniels:

I duly received your telegram of the 3rd. I haven't been able to find out just what is the matter with our waterproofing proposition. I spoke to Mr. Kennedy the other day in regard to it, and he explained that in view of the fact that Aiken was in the midst of a great deal of business due to the combination of his own and Kleins's Offices, that it would be impossible for him to start waterproofing immediately, but Mr. Kennedy promised me that instructions would be sent to Chicago to begin this week, as I wired you.

I have the suspicion however, that there is something else at the bottom of the matter, and I intend to find out what it is this week if possible. In the meantime, I think it would be well to do nothing whatever, so as not to force Mr. Kennedy's hand.

Yours very truly,

MH

Assistant General Manager.

TELEPHONE REDUCED.

OFFERS:  
W. DANIELS, President,  
F. THOMPSON, Vice-Pres.,  
C. BARNES, Secretary,  
F. H. BARNES, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

Aug. 5th, 1910.

Mr. Geo. F. Scull, Asst. Gen. Mgr.,

Edison Manufacturing Co.,

Orange, N. J.

My dear Mr. Scull:-

In reply to your 3rd, the situation is certainly beyond my conception. Mr. Kennedy's claim that Aiken is in the midst of a great deal of business is true enough, but at the same time Aiken wants more business, and through us has this week concluded an arrangement by which he will serve the Alcazar Theatre, (a place that he has long desired but was unable to obtain,) and with which go five other theatres actually contracted. It is our purpose to influence a good deal of business to Mr. Aiken as soon as they get started on waterproofing, and without boasting, we feel confident of landing him more contracts in the next ninety days than he ever got before in the same time.

Mr. Aiken is an anxious to begin waterproofing as we are to have him. I understand the carpenter has all the lumber out and made up for the gallery floor, of which I have written you previously. Mr. Aiken says, "Inside of twelve hours after he receives word to go ahead the floor will be ready to receive our washing machines".

This is the situation here, and the claim that Mr. Aiken is so full of business that he cannot start in our proposition at any time is based upon a misunderstanding of the facts.

When you find out the real trouble, if you think I can be of any assistance in remedying it do not hesitate to wire me and I will leave immediately. We cannot afford to lose this opportunity of showing the benefits of waterproofing.

Yours truly,

NATIONAL WATERPROOF FILM COMPANY

*W. Daniels* Pres.

Mr. Geo. F. Scull

Assistant Gen. Mgr. Edison Mfg. Co.  
Orange N.Y.

My dear Mr. Scull

I have just had a conference with Mr. Edison over your letter of 9th to him. We agree that the chances of getting an Article patent are greatly in favor of our first application; Mr. E. thinks he could get this within 30 days while the other could only be had (if at all) through the long delay of appeals - We believe "a bird in the hand is worth two in the bush" Besides we can not agree with you that a patent covering the waterproofing of a celluloid moving picture film would not cover an imitation Celluloid film, even though it were disguised under a new name (Acetate of Cellulose for example). In honor of its English discoverer Mr. Parks, what we now call Celluloid was originally known as "Parkesine" and it was some years

later that an American manufacturer first  
christened it Celluloid

Since Mr. Parks' three various formulas have  
been employed in making celluloid, to  
meet requirements of the many different  
articles made from it but the cellu-  
lose base has always remained the es-  
sential and fundamental ingredient.

There is the real difference between  
treating cellulose with certain acids  
and calling it Celluloid or treating  
Cellulose with other acids and calling  
it Acetate of Cellulose? The fact that  
one is less inflammable than the  
other does not differentiate them suf-  
ficiently to claim that either is not  
Celluloid.

Celluloid as made by Mr. Parks was opaque  
it has since been made transparent  
but either transparent or opaque it  
is still Celluloid

Aside from our conviction that no  
court would allow an infringement  
to continue on such a flimsy techni-  
cality is it not a fact that the product



of the independents is practically all in inflammable celluloid so that even under a ruling that U. S. stock was not celluloid, nor an imitation of it, our patent would prevent independents from waterproofing, and ~~this~~ this way should carry as much value to the Patents Co. as though the patent specifically covered acetate of cellulose.

Another thing which influences me to some extent: I expect some day the licensed manufacturers will cease paying  $\frac{1}{2}$  cent extra for something worth  $2\frac{1}{2}$  cents less in other words that they will return to inflammable film. Under these circumstances I have asked Mr. Wilson to use all haste in getting out our original Artists patent. I hope you will concur in this as the proper thing.

Yours truly

Watson & Prosser  
Hall Waterproof Paper Co.

Chicago  
Aug 6-1910

OFFICERS:  
W. A. DANIELS, President,  
J. E. THOMPSON, Secy.,  
C. PARSON, Treasurer,  
F. C. BARNES, Secretary.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

TELEPHONE HEDDIEB99.

August 11th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,  
Edison Manufacturing Co.,  
Orange, N. J.

Dear Sir:-

Expected to hear from you yesterday, but not having heard up to noon today I wired you as follows which I now confirm:-

"Crazy to hear from you as to prospects with Kennedy. Could I do anything if there? Could be in New York Monday. Wire."

I am most anxious to know if this stoppage of waterproofing the General Film Company's films here is only temporary or permanent. Next, I am anxious to know if it is through any fault of ours or our proposition that the stoppage has occurred. As I have written you before, Mr. Aiken seems as anxious to get started as we are and so we know that Mr. Kennedy's excuse that Aiken was very busy is a subterfuge.

I feel as though I must see him or hear from you that the matter will be speedily adjusted.

Yours very truly,

NATIONAL WATERPROOF FILM COMPANY

*W. A. Daniels* Pres.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

TELEPHONE REDDIE 496.

August 12th, 1910.

Geo. F. Scull, Asst. Gen. Mgr.,

Edison Mfg. Co.,

Orange, N. J.

Dear Sir:-

I am very glad indeed to receive your telegram of this morning admonishing me against going either crazy or to New York, for to tell the truth I am not anxious to go either way, but I am certainly very much exercised over this unaccountable situation. My imagination cannot picture what has brought it about. Evidently it is a matter of serious import, requiring as you say cautious handling and not brute force.

I am very glad that Mr. Dyer will take the matter up within the next few days, and I want to ask of you to wire me as soon as you have any news of a settlement.

Meanwhile, I remain extremely anxious.

Very truly yours,

NATIONAL WATERPROOF FILM COMPANY

*W. J. Scull* Pres.

EDISON MANUFACTURING COMPANY

G. F. S.

Aug. 18, 1910.

Mr. W. A. Daniels,  
4200 West Adams Street,  
Chicago, Ill.

My dear Mr. Daniels:-

Mr. Dyer had a talk with Mr. Kennedy, and I supplemented it today with another one. It seems that the things which I had surmised were standing in the way of your proposition have no basis. At least, Mr. Kennedy did not indicate that there was any such thing against the proposition. He gave two reasons why the matter has not been put through. The first was that it had been intimated that you were getting out an extensive advertising campaign to call the attention of the exhibitors to this proposition, and this he resented since the thing was to be carried out as an experiment. I understand, of course, that you will believe that it cannot be carried out successfully as an experiment unless the exhibitors' attentions are called to it, but in view of the care with which we must necessarily handle this proposition I think we will have to submit, and I would suggest that on this head you write a letter to Mr. Kennedy saying that I told you what he had said, and assuring him that nothing of that kind will be done. I think this will remove one obstacle.

EDISON MANUFACTURING COMPANY

Mr. W. A. Daniels

-2-

Aug. 18, 1910.

In the second place he said that the business of the Calumet Exchange had been dumped in on Aiken in the last few days, and he will be almost swamped with work, and would have absolutely no room for the proposition, and he did not believe that they would be ready to begin before ten days or two weeks, possibly. This matter, you can confirm for your end, and I would suggest that in the letter you write to Mr. Kennedy you ask him to set a definite date on which you can be ready to begin, and this will probably put it up to him so that he may give you a definite answer.

Yours very truly,

Assistant General Manager.

EW

TELEPHONE KEBBIE 654.

OFFICERS:  
W. A. DANIELS, President  
F. B. THOMPSON, Vice-President  
S. B. GARDIN, Secretary  
F. R. GARDIN, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO, Sept. 10th. 1910

Mr. George F. Scoll

Asst. Gen. Mgr. Edison Mfg. Co.

Orange, N. J.

My dear Mr. Scoll:

We are getting all of the Turner & Dahnken release except the Biograph. I have written to Mr. Kennedy asking for this but we get no reply and no film. If you can do anything to induce him to ship Turner & Dahnken's films to us, it would be appreciated by us and Turner & Dahnken as well. We have heard nothing from Mr. Kennedy regarding the general film work, since I was in New York. I do not suppose there is any use, in your asking Mr. Kennedy about this. We have about abandoned all hope in this direction. The delay is inexplicable.

We have the Spoor machines in our factory now and ~~an~~ ~~the~~ setting them up they will be running by next Wednesday.

Yours truly

NATIONAL WATERPROOF FILM CO.

*W. A. Daniels* President

Dic. W. A. D.

TELEPHONE HEREFORS.

OFFICERS:  
W. A. DANIEL, President  
C. S. HUGHES, Vice-President  
J. S. BARNES, Secretary  
F. E. BARSON, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO, Sept. 16th. 1910

Mr. J. F. Scull

Assistant Sup. Edison Mfg. Co.

Orange, N. J.

My dear Mr. Scull:

I am glad to advise you that the first installment of Turner & Dahnken's Biograph pictures came in to day. We also had a letter from the Biograph Company stating that they would send all of Turner & Dahnken's releases to us in the future. This now gives us all, and to day we shipped them eleven reels.

Yours truly

NATIONAL WATERPROOF FILM CO.

*W. A. Daniel*  
-----Pres't.

Dic. W.A.D.

TELEPHONE 433222-4.

OFFICERS:  
W.A. DANIEL, President  
J.B. THOMPSON, Vice-pres.  
J.B. EDSON, Secretary  
J.B. EDSON, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO, Sept. 27th. 1910

George F. Scull,

Assistant Gen. Mgr. Edison Mfg. Co.

Orange, N. J.

My dear Mr. Scull:

I am in receipt of yours of the 19th. It seems to me that it will be best to say nothing further to Mr. Kennedy. Perhaps in his own good time he will bring the subject up himself. I saw Mr. Spoor yesterday. He expects to go east this week. He thinks our coathing would be of great advantage to the General Film here and he volunteered of his own free will to say that he would speak to Mr. Kennedy about it when he saw him.

We are still coating all of Turner & Dahnken's releases and I presume with satisfaction, at least we hear nothing to the contrary. We received a check from them to day and this puts me in mind to say that the Edison Mfg. Co. owe us about \$800.00 for solution, since Aug. 9th. We hope to receive this shortly.

Yours truly

NATIONAL WATERPROOF FILM CO.

*W.A. Daniel*  
-----Pres't.

Dic. W.A.D.



TELEPHONE HERDIE 659.

OFFICERS:  
W. A. DANIELS, President,  
F. B. THOMPSON, Vice Pres.,  
D. BROWN, Secretary,  
F. A. BARNES, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO, Oct. 3rd. 1910

J. F. Scull

Assistant Gen. Mgr. Edison Mfg. Co.

Orange, N. J.

My dear Mr. Scull:

Replying to your 29th. of Sept. will say that in as much as the 60 days will be up in less than a week there seems to be no grounds for controversy. At any rate I am glad to inform you that the wait will not embarrass us. Our greatest lack at present is work. We are doing practically nothing outside of the Turner & Dahnken releases, and I certainly chafe under the conditions. I want to stick to the licensed side but my experience with the G.F.Co. releases here carries little encouragement to do so. On the other hand I should have no trouble in contracting to do all the films of the new American Co. here. Would this in your opinion be advisable? You will at once recognize the two sides of the question on which I shall be glad to receive your advice.

It seems to me that our proposition would be invaluable for Mr. Flintom in St. Louis, where he is having such strong independent competition. I am prevented from soliciting him through the believe that he would not act except through the advice of his friend Mr. J. J. Kennedy. If Mr. K. would not consent to our coating the Theatre Film Co. releases for nothing in Chicago, would he advise his friend Mr. Flintom to pay us \$3.50 pr reel for St. Louis? I am sure that by waterproofing all of his releases and once a week washing his films Mr. Flintom could not alone advertise the only clean service, but would have all that he claimed just as Turner & Dahnken are successfully doing in San Francisco.

Your early reply will oblige

Yours truly

NATIONAL WATERPROOF FILM CO.

*W. A. Daniels*  
Pres't.

Dio. D.

KB.

TELEPHONE KEDDIE 624.

OFFICES:  
W.A. DANIELS, President  
F.B. TUCKERSON, General  
S. HANCOCK, Secretary  
J.C. HANCOCK, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO, Oct. 6th. 1910

J. F. Soull

Assistant Gen. Mgr. Edison Mfg. Co.

Orange, N. J.

Dear Sir:

We shall start in next week waterproofing the Selig and Essanay releases for Lieber of Indianapolis. This is an experiment which if successful will result in Lieber having all of his releases waterproofed. By the way, he reports very favorably on your films, says the outlast all others and this too without any washing. In fact, Lieber had never taken out of the crate our washing machine sent him four months ago. We unpacked it yesterday and he promised to wash his waterproofed releases hereafter once a week. We also have advice from the Pacific Coast to the effect that the Clune people are seriously considering having all of their films waterproofed as Turner & Dahnkén are doing.

Yours truly

NATIONAL WATERPROOF FILM CO.

*W.A. Daniels* Pres't.

Dic. D.

KB.

EDISON MANUFACTURING COMPANY

Nov. 7, 1910

G. F. S.

Mr. W. A. Daniels,  
National Interproof Film Co.,  
4200 West Adams Street,  
Chicago, Ill.

Dear Sir:-

I duly received yours of October 22nd and 27th and have kept them to turn them over in my mind.

First, taking up the suggestion in yours of the 22nd ult., I frankly must say that I think the proposition is a little too thin to put across. We have nobody around here, that I know of, who is in a position to make such an investigation as this would call for, and I think in any event the theory would be too much for the average person to accept. In addition, of course, there is a second edged sword, as you say, which would make it an additional reason for not taking it up.

I have carefully gone over your letter to Mr. Kennedy and have the following criticisms to make in regard to it. As stated above, I do not believe the point in reference to the micro-organisms in the film has any weight. I doubt very

#2-J. A. Daniels-

much the expediency of saying anything under the heading of "Financial Conditions". As far as I know, nothing whatever has ever been said along these lines and I think the time to take it up would be after we could convince the General Film Company that there is something in the proposition from the standpoint of clean film. It looks too much like a stock-jobbing proposition, although in your subsequent paragraph you disclaim such a purpose.

I certainly think the last paragraph is highly objectionable. Mr. Kennedy, so far as I know, has no aversion to writing letters, although he has no serious objection to neglecting to write. He can write a letter, however, quickly enough when he thinks it is called for, and in a way I rather think the paragraph is half way insulting.

I wish that you would write to Turner & Dahnken and see whether or not you can get a letter from them which we could use in our advertising of the Kinetogram, to show the benefit of waterproofing.

I am interested in your statement that the Sales Company is now putting out 1,000 films per week. I do not know what your basis for such a belief is. Only this week one of the members of the Sales Company told one of our people, and he had a purpose in saying it which would lead him to tell the truth, that as a matter of fact they are putting out about 500 reels per week. I admit that even 500 reels per week is more than we ought to let them put out, but at the same time there is considerable difference between this and the 1,000

EDISON MANUFACTURING COMPANY

#3-W. A. Daniels-  
which you mention.

Please remember that my suggestions as to Mr. Kennedy's letter are merely suggestions and not by any means final. If you do not believe there is any point to them, I wish you would go ahead and write the letter as you think best. Personally, I doubt very much whether such a letter will do any good, but it might be well to try it out, since you evidently think that such a thing is desirable.

Yours very truly,

FC

Asst. GENERAL MANAGER.

[ATTACHMENT]

TELEPHONE REDDIE 684.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

### Proposed letter.

Mr. J. J. Kennedy  
General Film Co.  
No. 8 5th. Ave. New York, N. Y.

My dear Mr. Kennedy:

Interesting. We want to tell you something about waterproofing which should interest you to the extent of considerable thought, if not to immediate action.

Exclusiveness. You recognize the commercial advantage of controlling exclusive goods.

Condition. The condition of the film business of to day, suggests the importance of some distinguishing feature which can be claimed as superior.

Superiority. Waterproof films have many good points for emphatic claims of this kind. There may be people who take exception to this statement, but they will be those who have never washed a waterproof film, even if they have fairly tested it in other respects.

Paramount claim. The paramount claim for waterproofing is, that a film, so treated, can be kept clean and free from "rain" by periodically washing it with soap and water. Without this washing the value of waterproofing is of course minimized.

Washing by machinery. We manufacture a washing machine which automatically washes and dries a thousand feet of waterproof film in eight minutes.

Volatile Fluids. Films as you know should never be washed with volatile fluids, which dry up the glycerine in the emulsion upon which all films depend for flexibility.

The G. F. Co. Position. The General Film Co. is in position to force a systematic and proper washing of waterproof films, and thus give a cleaner service.

A feature. By making a feature of cleanliness, trade could be increased and more money could be made.

Protection. The proposition is well protected with patents.

As a patented article. Waterproofing cannot be hidden in a camera box, nor secretly used behind barred doors. Infringement is apparent at a glance.

[ATTACHMENT]

- 2 -

TELEPHONE HERDIER 699.

OFFICERS:  
W. A. RANFISH, President  
T. A. THOMPSON, Vice-President  
G. R. RANFISH, Secretary  
F. G. RANFISH, Treasurer



# NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
1320-1322 WEST ADAMS ST.

CHICAGO.

The method patented.

The application of waterproofing by first sizing the film is a patented process, and without infringement, coating can not be applied which will not peel off. The patented method of sizing not alone prevents the waterproofing from peeling from the emulsion, but keeps the emulsion from lifting off the base of the film.

The Coating machine patented.

Waterproofing is applied by a coating machine which spreads the solution all around the sprocket holes without clogging or going through to spot the back. This machine is patented under claims which would make it difficult, if not impossible, to coat a film without infringement.

The Drying machine patented.

The drying machine takes the film from the coater and carries it face up (without stretch or shrinkage) until it is dry and reeled. This machine is also patented.

The Formulas.

The component parts of both sizing and waterproofing mixtures are secrets difficult to determine. They are the result of considerable cost in time, money and experiments, even if known, they could not be practically applied without infringing our patents.

Foreign patents.

Patents have been allowed in France, Germany and England as well as in this country.

Advantages.

A waterproof film is one which can be washed with soap and water and the advantages of occasionally washing in this manner are:

- a - It removes so called "rain" by washing the dirt from out the scratches.
- b - It keeps the film soft and pliable.
- c - As a hygienic measure it is of great value, for no film can travel around week after week without becoming more or less infected with bacilli and other micro-organisms. Bacilli have a recognized affinity for gelatine; sunlight destroys them, and any light disturbs them, so that it is believed that millions are forced by the light of a projecting machine to escape from the film towards the screen into the auditorium.

Legislation.

It is thought that in the interest of public health, municipal or state enactments could more easily be obtained in favor of washable films than in favor of non-inflammable films which, upon test, have been found to be inflammable.

[ATTACHMENT]

- 3 -

TELEPHONE HOBBS CO.

OFFICERS:  
W. A. BAKER, President  
F. E. THOMPSON, Vice-President  
G. H. BAKER, Secretary  
F. E. BAKER, Treasurer



# NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4203 WEST ADAMS ST.

CHICAGO.

Other and miscellaneous advantages.

- a - Waterproofing dries as hard as celluloid and is therefore less likely to scratch than is the unprotected gelatine of an ordinary film.
- b - A waterproof film cannot stick at a gate of a projecting machine.
- c - No small particles of the metallic developing salts can come off between the folds of the reel to scratch it.
- d - The film runs smoother and the picture is therefore steadier on the screen.
- e - The picture is brighter because a waterproofed film being shiny on both sides admits more light.
- f - The joints are less liable to part, and if they do part, a waterproofed film can be quickly spliced by first scraping off the waterproofing with a sharp knife, and then proceeding as with any film.
- g - The life of a film is commercially extended, runs several months old, being as clean and clear as with ordinary films after a few days.

The Chicago test..

For some unaccountable reason the ninety days gratuitous waterproof test, arranged for the Dearborn Street Department of the General Film Co. here, has never been started. While we are still willing to carry out our part of the arrangement, we believe it should not now be necessary; the reason being that Messrs. Turner & Dahmken of San Francisco have for nearly three months waterproofed all new releases, and have established what we sought to prove through the Chicago trial, i.e. that waterproofing is of great benefit to moving picture films when intelligently handled.

Great benefit.

Arrangements.

The National Waterproof Film Co. is anxious to arrange with the General Film Co. for waterproofing all of their films, by which they (the G.F.Co.) can have the exclusive benefits of the process, and thus effectually differentiate their goods from those of their competitors.

Facilities.

To facilitate this work the waterproof company is ready to establish a plant in or convenient to NewYork for Eastern releases, and to enlarge the present Chicago plant to take care of all Western work.



[ATTACHMENT]

TELEPHONE HEDZIGSA.

OFFICERS:  
W. A. DANIEL, President,  
F. B. THOMPSON, Vice,  
D. BARTON, Secretary,  
F. C. ROBERTSON, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

Financial  
condition

*Mr*

The National Waterproof Film Co. is at present more than self sustaining. It has a paid in capital of \$65,000.00 with \$35,000.00 unissued treasury stock. This could be subscribed for by you or friends; in this way not alone receiving the full benefit of exclusive use, but getting 35% of the net profits besides.

Investment  
not contingent.

Our proposition however is in no way contingent upon any investment upon your part.

Reply.

*Mr*

While we know your aversion to writing letters, we earnestly request a reasonably prompt reply to this one. Meanwhile we remain with best wishes.

Yours truly

NATIONAL WATERPROOF FILM CO.

*W. A. Daniel*  
Pres't.

Dic. D.

KB.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.  
MOVING PICTURE FILMS MADE WASHABLE WITH WATER  
PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.  
CHICAGO, Nov. 10th. 1910

Mr. George F. Scull

Assistant Gen. Mgr. Edison Mfg. Co.

Orange, N. J.

My dear Mr. Scull:

I am in receipt of your 7th, and wish to thank you for your advice, part of which, at least, I shall follow, but I cannot bring myself to believe that the letter can do any harm, even if it does no good. I don't think we should sit quietly by, with our proposition "hidden under a bushel".

The General Film Co. needs us, and it needs us badly and immediately. If they are not awake to their own interest, it is our loyal duty to arouse them. If they are past awaking, then we should know it and be governed accordingly.

There will be nothing in my letter, which cannot be substantiated except the bacilli idea, and I offer this only as a suggestion. The gentleman, who first spoke to me about it, is no novice in film matters, as you would admit, were I at liberty to name him.

My information as to the Sales Co. output came from the Independent side, so of course, was taken with some salt. I passed it to you as I got it, and you can salt it to suit yourself.

I have already written Turner & Dehnken for the letter, which you can publish.

Lieber has bought a washing machine for \$100.00 and continues paying us \$5.00 pr. reel for waterproofing his Selig and Essanay releases. From all that we can hear, they are pleased with the proposition, but have perhaps not been at it long enough to give us a letter for publication.

Yours truly

NATIONAL WATERPROOF FILM CO.

*W. A. Daniels*  
Pres't.

Dic. D.

KB.

Ans 12/11/09



CHICAGO ATHLETIC ASSOCIATION

4208  
W Adams St

Mr. Geo. F. Scull  
c/o Edison Manufacturing Co.  
Orange N.J.

My dear Mr. Scull

There is a man here named  
Scates (understudy to Mr. Atkins -  
Old Theatre Film Supply Co.) who  
is very ambitious to play first  
fiddle in the old Spoor Exchange.  
It is common talk that Mr. Bell,  
present incumbent at Spoor  
is not equal to the job, and that  
sooner or later some change  
must occur. -

Scates, besides being a friend of  
waterproofing, is a very capable  
fellow, and if you have any chance  
to put in a word for him it  
will be greatly appreciated by

Yours truly,

W. A. Daniels

Chicago  
Nov 20-10

EDISON MANUFACTURING COMPANY

Dec. 6, 1910

G.F.S.

Mr. W. A. Daniels,  
c/o National Waterproofed Film Co.,  
4200 West Adams Street,  
Chicago, Ill.

My dear Mr. Daniels:-

I have yours of the 30th ult.,  
in reference to Mr. Sentes. If anything turns up  
which makes it possible, I will follow your suggestion.

Yours very truly,

ED

Assistant General Manager.

TELEPHONE KEDDIE 604.

OFFICERS:  
W. A. BARNES, President  
F. E. THOMPSON, Vice  
G. BARNES, Secretary  
F. A. BARNES, Treasurer



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000.

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO, Dec. 20th. 1910

My dear Mr. Scull:

As a postscript to the enclosed I must confide in you that in order to get the right umbrellas at the right price for our friends in Orange we were compelled to buy a dozen and a half. So having 15 over we have sent one to each of the licensed film manufacturers as well as one to Mr. P. L. Waters of the G. F. Co.

The following is the complete list with handle marks:

- Mr. J. A. Berst  
"Be fortified 'gainst cloudy skies and rainy films".
- Mr. J. S. Blackton  
"When the sky is rainy take me out.  
When the film is rainy go out yourself".
- Mr. Frank L. Dyer  
"I rejoice to be held upright over the upright".
- Mr. Thomas A. Edison  
"No one knows who invented me,  
Thomas A. Edison owneth me".
- Mr. J. J. Kennedy  
"May the covering of my ribs waterproof the covering of yours".
- Mr. George Kleins  
"Rain spoils good clothes  
And picture shows".
- Mr. S. Long  
"A leaky umbrella and a rainy film dampen the feelings".
- Mr. S. Lubin  
"An umbrella is at its best when it rains,  
a picture film is at its worst".
- Mr. F. J. Marion  
"Cloudy skies mean rain,  
Rainy films mean ruin".

TELEPHONE HERDIE 684.

OFFICERS:  
W. A. DANIELS, President,  
F. B. THOMPSON, Vice-President,  
C. B. BROWN, Secretary,  
F. R. BARNES, Treasurer.



## NATIONAL WATERPROOF FILM CO.

CAPITAL \$100,000

MOVING PICTURE FILMS MADE WASHABLE WITH WATER

PROCESS AND MACHINERY PATENTS PENDING  
4200-4202 WEST ADAMS ST.

CHICAGO.

- Mr. H. W. Marvin  
"Protect your films from rain  
and I will protect you".
- Mr. Gaston Melies  
"To be serviceable, umbrellas and picture  
films should be waterproof".
- Mr. Wm. T. Rock  
"As you appreciate waterproofing,  
I'm your friend".
- Mr. George F. Scull  
"In rain, I reign above the most exalted".
- Mr. William N. Selig  
"A waterproof suggestion".
- Mr. F. W. Singhi  
"A rainy sky is always above you,  
A rainy film should be beneath you".
- Mr. A. E. Smith  
"To rainy films I do object,  
From other rain I will protect".
- Mr. George K. Spoor  
"A good umbrella and a waterproof film,  
fear no rain".
- Mr. P. L. Waters  
"A General's order - "Keep your powder dry  
and your films rainless".

Yours truly

NATIONAL WATERPROOF FILM CO.

-----Fres't.

Dio. D./KB.

**LEGAL DEPARTMENT RECORDS  
MOTION PICTURES - INTERFERENCE PROCEEDINGS**

***Aiken v. Moore and Armstrong (No. 27,476)***

***Platt v. Morris and Leveen v. Aiken v.  
Moore and Armstrong (No. 27,477)***

***Oertly v. Aiken v. Power (No. 27, 479)***

***Oertly v. Aiken v. Schneider v. Platt (No. 27,480)***

***Currie v. Moore and Armstrong (No. 30,181)***

This folder contains material relating to five Patent Office proceedings. The interferences involve applications filed by Edward L. Aiken, John Oertly, William Platt, Nicholas Power, Eberhard Schneider, and other parties, including William B. Moore and Thomas H. Armstrong of Moore, Bond & Co., successor to the Stereopticon and Film Exchange of Chicago. The documents pertain to automatic shutters, also known as fire shields or protective gates, which were attachments used in film projectors for fire safety. The selected items, which cover the period 1906-1908, include correspondence, agreements, briefs, depositions, and patent specifications. Also included are four undated, rough drawings by Edison, which relate to other drawings by Schneider and Power. The correspondence is primarily by Frank L. Dyer and Herbert H. Dyke of the Legal Department and by other patent attorneys, including Bacon & Milans of Washington, D.C., and Charles T. Brown of Chicago. There are also letters by attorney Baxter Morton, vice president of the Nicholas Power Co. of New York.

Among the items not selected are twenty-five patents covering the years 1869-1908. The earlier patents relate to improvements in steam engine governors; most of the later patents pertain to the use of automatic shutters in projectors for fire safety. The inventors represented include one-time Edison employee James H. White, as well as Leon Bories of San Francisco; August and Louis Chronik and Nicholas Power of New York; Frank McMillan, John J. Pink, and Alvah C. Roebuck of Chicago; and Albert D. Palmer of Pittsburgh.



**KROHN, FECHHEIMER & CO.**  
MAKERS OF  
WOMEN'S SHOES.



BRANCHES:  
BERLIN, GERMANY, Bismarckstrasse, 1C.  
SYDNEY, AUSTRALIA, 14 BARRACK ST.

FACTORY & GENERAL OFFICES.

CINCINNATI, O. U.S.A. April 21,

CABLE ADDRESS  
"KROHNFECH, CINCINNATI"  
WESTERN UNION CODE.



Mr. Frank L. Iyer,  
Legal Dep't Edison Phonograph Works,  
Orange, N.J.

Dear Sir:

Enclosed I beg to hand you petition and assignment of patent which I have executed as agreed, and trust you will find same in order.

In going over the claims on the patent I notice you have some pretty well covered, but perhaps the following suggestions might not come amiss.

The shutter gate when closed allows an air space of 5/8 inch between the shutter and film, hence same can withstand any heat to which it may be subjected.

In the event of crank arm or any other part of the mechanism becoming disconnected, shutter would drop of its own volition.

The Underwriters here demand a set screw on the crank to prevent same slipping from the shaft, and you will note that I have provided one, although in such event the shutter would close, as above mentioned.

In the event that an operator should attempt to use the machine without closing the shutter gate, and making the proper connections with crank arm, you will notice the crank arm immediately becomes engaged with the cog, and the machine cannot be operated.

I merely mention these few points which you may not have brought out quite as strong in your claims, as may be advisable. However, this is of course for you to decide, and should there be any further matters that you wish given attention by me, kindly let me know, and oblige,  
Yours truly,

*John C. Petty*



May 2, 1907

John Oertly, Esq.,  
c/o Krohn & Pechheimer,  
9th & Sycamore Sts.,  
Cincinnati, Ohio.

Dear Mr. Oertly:--

Your application for kinetoscope film protecting shutter has been placed in interference with other applications in the Patent Office. One of these interferences involves claims 17 and 18 of your application, which are as follows:

"17. In a kinetoscope, the combination of a frame having a light aperture, a main shaft, and film feeding mechanism, a gravity closure for the light aperture having an outwardly extending member, a member loose on the main shaft, and means connected with said last named member for engaging the projecting member of the closure and opening the closure, and holding the same open while the main shaft is in operation, and releasing the closure when the main shaft ceases to operate.

18. In a kinetoscope, the combination of a frame having a light aperture, a main shaft, a friction clutch member thereon, a sleeve loose on said shaft, a crank handle adapted to hold the loose sleeve in contact with said clutch member, while the crank is being operated, whereby the sleeve is frictionally connected to the shaft, and a hinged closure normally covering the light aperture, operative connections between the closure and said sleeve, whereby the rotation of the sleeve opens the closure and maintains it open while the crank handle is in operation, said sleeve and its connections moving relative to the shaft and returning to normal position and allowing the closure to cover the light aperture when the crank handle ceases to operate."

JO--2--May 2, 1907

You will notice that there is perhaps some question as to whether the terms used in these claims properly describe your device, as for instance the term "main shaft" would have to be construed to include the hub of the main drive wheel and the sleeve thereon, and the closure or shutter is described in claim 17 as having "outwardly extending member"; whereas in your construction the outwardly extending member or ~~ax~~ crank, is attached not directly to the shutter but to a rock shaft. These claims were first made in another application and were suggested by the Patent Office as claims which could be made in this application, and this fact accounts for the inaccuracies of description to which I have referred.

However, these questions are not important at this time, but probably will have to be considered later.

Another interference involves your claim 20, which is as follows:

*only one member*  
"20. In a picture projecting machine, the combination with the film moving mechanism thereof, of a hinged door, the said door having a sight opening therein, a gravity shutter normally closing said opening, film protecting shields carried by the upper and lower edges of said door, and means actuated by the above mentioned mechanism for raising said shutter."

and the third interference involves your claim 21:

"21. A shutter attachment for kinetoscopes comprising a vertically hinged gate frame, a rock shaft journaled on said frame and carrying a shutter and a crank."

Although these last two claims were suggested by the Patent Office to be made in your application, there is apparently no question as to the accuracy of the description therein.

JO--3--May 2, 1907

It will be necessary to file as soon as possible, in the Patent Office, what is known as the preliminary statement, in each of these interferences. I assume that it is altogether likely that you invented the subject matter of each of these four claims which are copied above, at one and the same time, and if this be so you will need to give me the facts for but a single statement, and I can prepare the others therefrom. Inasmuch as it will be necessary for the statements, after they are completed, to be sent to you for signature, and the time for filing them in the Patent Office is quite short, I hope that you can give me the facts which I shall now proceed to specify, as soon as possible, but I wish to impress upon you the necessity of making accurate statements in each case, and of making these dates which you will fix, as early as it is possible for you to prove, because it is a rule of the Patent Office that testimony of dates earlier than those set out in the preliminary statement will not be accepted in interference cases.

Please let me know then:

- (1) When you first conceived the invention; that is, when it first took form in your mind.
- (2) When you first made drawings of the invention, and if you made no drawings then so state.
- (3) When you first explained the invention to others, and to whom.
- (4) When you first made a model showing such invention.
- (5) When your invention was first embodied in a

J0--4--May 2, 1907

(6) When and where such machine was first successfully operated.

The mere statement of these facts which are desired, is self explanatory, except that a word of explanation as to 4 and 5 is desirable. Under 4 I have asked for the date of making a model. By the word "model" is meant a construction which cannot be relied upon as a reduction to practice of the invention. As I understand it, the machine which we have had here and which you made, is an actual full size machine and is such a machine as may be relied upon for a reduction to practice, and is not such a construction as is designated in the Patent Office by the term "model". Please state definitely when this machine which we have here, was first made, and operated. If you made an earlier construction embodying the invention, but which was not an actual reduction to practice of the invention, please tell me all about it, if you have it or can get it, and the date of its making.

I wish again to call your attention to the fact that there are three different interferences, and it may be, although it does not appear to me to be likely, that you made the inventions which are placed in these three different interferences, at different times. Please consider this matter carefully and tell me whether you think there should be any difference in the dates to be set up in the three preliminary statements which must be made.

Awaiting a reply which I trust will be received as

JO--5--May 2, 1907.

early as is consistent with accuracy, I am--

Yours very truly,

HHD/MJL

BOX No. 76

IN THE UNITED STATES PATENT OFFICE.

Edward L. Aiken :  
vs. :  
John Oertly : INTERFERENCE NO. 27,479.  
vs. :  
Nicholas Power :

NICHOLAS POWER, of New York, in the County of New York, and State of New York, being duly sworn deposes and says that he is the party to the interference declared by the Commissioner of Patents April 30, 1907 between his application for Letters Patent filed October 20, 1906, serial No. 339,801, and an application of Edward L. Aiken, of Orange, N. J., and an application of John Oertly, of Cincinnati, Ohio;

That he conceived the invention set forth in the declaration of interference on or about the 15th day of August, 1905;

That he first made drawings of the invention set forth in the declaration of interference on or about the 15th day of August, 1905;

That he explained the invention set forth in the declaration of interference to others on or about the 15th day of August, 1905; that he never made a model of the invention, in the sense of a structure incapable of practical use; that he first embodied his invention in a full sized operative structure on or before the 10th day of September, 1905 and that the said structure was successfully operated in the City of New York, in the County of New York, and State of New York as soon as it was complete;

That he has manufactured other structures for use and sale and that more than one hundred of the said structures are now in use.

Subscribed and sworn to before me the 17th day of May, 1907.

[ATTACHMENT]

This invention relates to fire shields for moving picture films, and it has for its object the provision of a shield adapted to normally cut off the rays from the lamp of a moving picture apparatus which would pass through the projection aperture, together with mechanism for automatically moving the shield out of operative position and holding it out of operative position as long as the film-feeding mechanism of the apparatus is in operation, and restoring the shield to operative position instantly when the operation of the film-feeding mechanism is stopped. A further object of the invention is to provide a shield of the character specified with shifting mechanism which will operate positively and with perfect reliability, so as to insure the protective action of the shield when the film is at rest without interfering with the passage of light through the projection aperture when the film is in motion.

In the accompanying drawings I have illustrated my invention as applied to an ordinary type of moving picture apparatus, such portions of the moving picture apparatus being shown as necessary to render the action of the shield and its operating mechanism clear.

In the drawings, in which corresponding parts are designated by similar characters of reference in the several views:

Figure 1 is a top plan view on a small scale of a moving picture apparatus equipped with an improved shield and operating devices.

Figure 2 is a rear elevation on a larger scale of the principal parts of the structure shown in Figure 1.

Figure 3 is a fragmentary side elevation on the scale of Figure 1 of the structures shown in Figure 2.

Described in general terms, the present invention

[ATTACHMENT]

comprises a movable shield 1 suitably mounted in relation to the projection aperture 2 of the moving picture apparatus, and mechanism operated by the film-feeding device to move the shield out of operative position when the film-feeding mechanism is set in operation and to hold the shield out of operative position only so long as the film-feeding mechanism is operated and permit the shield to return to its normal or operative position on the instant that the operation of the film-feeding mechanism is stopped.

In the particular embodiment of the invention illustrated, the shield is suspended from a short rock shaft 3 journaled in suitable bearing lugs 4 on the back plate or back door 5 of the moving picture apparatus. The rock shaft 3 has extending from one end thereof at right angles thereto and in a plane perpendicular to the plane of the shield 1 an arm 6 which projects forward when the shield 1 is in normal, or vertical, position. Adjacent to the arm 6 of the rock shaft is a cam 7 carried by a lever 8 pivoted at 9 between the top and bottom parts of a horizontally disposed bracket 10 mounted on the side of the moving picture apparatus adjacent to the main driving shaft 11, from which motion is imparted by gearing 12 or otherwise to the film-engaging devices. The lever 8 is held normally in the position shown in solid lines in Figure 1 by a spring 13, and mounted in a lug 14 which projects laterally from the lever 8 is a short vertical pin 15 which carries a roller 16, which is adapted to be engaged by a flange 17 provided on the inner end of the sleeve 18 which encircles the main driving shaft 11 and from which the crank 19, by which the apparatus is operated, projects. The sleeve 18 has a cam slot 20 formed therein, as best shown in Figure 1, and this slot extends through the flange 17, to facilitate the fitting of the



[ATTACHMENT]

sleeve upon the main driving shaft and the introduction of a pin 21, set in the shaft 11, into the slot 20. The sleeve 18 at the end of the crank is secured on the shaft 11 by means of a thumb-nut 22 which engages with the threaded socket formed in the end of the shaft and which also secured in place a ratchet collar 23 fitted on the screw 22 and adapted to engage with a notched end of the shaft 11, as indicated in Figure 2. This ratchet collar 23 carries a spring 24 which engages a pin or lug 25 extending laterally from the arm of the crank. This spring, cooperating with the ratchet collar 23, tends to hold the crank in the position shown in Figures 1 and 2, with the pin 21 near the inner end of the slot 20. When the crank is turned in the direction to feed the film through the apparatus, the force exerted on the crank first bends the spring 24, which permits the crank to turn on the shaft 11, and this turning movement of the crank causes the sleeve to slide along the shaft toward the journal 27 in which the shaft turns. The inward movement of the sleeve 18 brings the flange 17 in contact with the roller 16 and forces the lever 8 from the position shown in solid lines in Figure 1 to that shown in dotted lines. The swinging of the lever to the extent indicated in Figure 1 results in the turning of the rock shaft 3 through an angle of ninety degrees, as indicated in Figure 3, through the action of the cam 7 on the arm 6 of the lever. The turning of the rock shaft carries the shield 1 upward into horizontal position, as shown in Figure 3, thus <sup>un</sup>covering the projection aperture 2 in the back plate or door of the apparatus. As long as sufficient force is exerted on the crank to maintain the feed of the film, the shield will be held in inoperative position, as shown in Figure 3, and the passage of rays from the lamp through the projection aperture will

[ATTACHMENT]

not be cut off. As soon, however, as the pressure on the handle 26 is relaxed, the action of the spring 24 will cause a partial backward rotation of the crank about the shaft 11, and the action of the pin 21 in the cam slot 20 will restore the crank to the position shown in Figure 2. As the crank slides outward on the shaft 11 the spring 15 will restore the lever 8 to its original position and the shield 1 will drop under the influence of gravity to its normal operative position, thus cutting off the rays from the lamp and preventing the overheating of the moving picture film, which would result if the film were not shielded.

While I have shown and described the spring 13 as an element of the apparatus forming the presenting invention, the spring is not essential, as the weight of the shield 1 tends to depress it and exert an upward pressure on the arm 6 of the rock shaft, which tends to force the cam 7 and the lever 8 outward to normal position.

As the apparatus for controlling the position of the shield 1 is practically instantaneous in its operation, the rays passing through the projection aperture are cut off so quickly that ignition of the highly inflammable celluloid film ordinarily employed in moving picture machines from the rays of the lamp when the film is stationary is absolutely prevented. Consequently, conflagrations, such as have frequently been caused in the past by the ignition of the moving picture film from the heat of the lamp, owing to the stoppage of the feed of the film, are avoided.

While I have described a single embodiment only of my invention, it is to be understood that it is subject to various modifications in the details of construction without in any way departing from the spirit of the invention.

[ATTACHMENT]

Having thus described my invention, what I claim as new and desire to secure by letters patent is:

1. The combination with a moving picture apparatus having a projection aperture and film-feeding devices, of a shield for said aperture normally intercepting the rays of light passing from the lamp of the apparatus to the projection aperture, and means operative when said film-feeding devices are in operation to hold the shield out of its normal position, but permitting the return of the shield to normal position when the operation of said film-feeding devices is stopped.

2. The combination with moving picture apparatus having a projection aperture and film-feeding devices, of a shield normally covering the projection aperture, devices operated by the film-feeding mechanism for holding said shield in operative position as long as said film-feeding devices are in operation, and means operative when said film-feeding devices cease to operate to throw said shield-holding devices out of operation and permit the return of the shield to normal position.

3. The combination with moving picture apparatus having a projection aperture and film-feeding devices comprising a driving shaft and a cam-controlled sleeve on said shaft through which power is imparted to said shaft, of a shield for the projection aperture which normally covers said projection aperture, and devices operated by said cam-controlled sleeve only during the operation of said film-feeding devices to hold the shield out of normal or operative position and permitting the return of the shield to normal position as soon as the operation of the film-feeding devices is stopped.

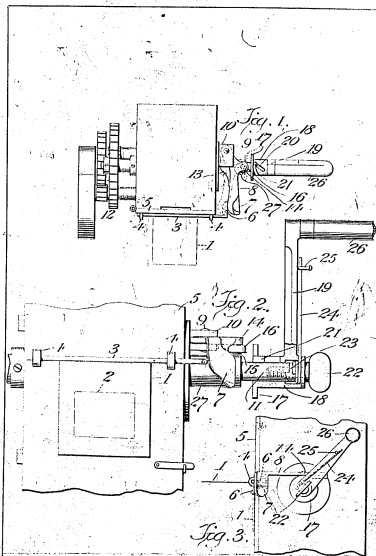
4. The combination with moving picture apparatus having

[ATTACHMENT]

a projection aperture and film-feeding devices, of a driving shaft for said film-feeding devices, a crank mounted on said driving shaft and slidable thereon, said crank having a cam slot therein, and said shaft having a pin engaging said cam slot, of devices operated by said sleeve when power is applied to the crank to operate the film-feeding devices, whereby said shield is forced into and kept in inoperative position as long as said film-feeding devices are in operation but is allowed to return to normal position as soon as the operation of said film-feeding devices is stopped. *a sleeve with*

[ATTACHMENT]

BOX No. 7



*Nicholas Tower*  
Inventor

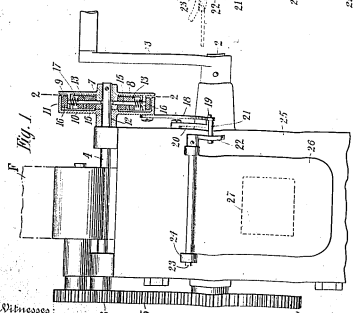
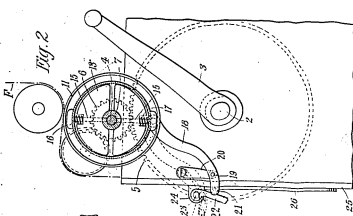
*Nicholas Tower*  
Inventor  
*Yale Porter*  
Attorney

180  
87

[ATTACHMENT]

BOX No. 56

37175 MAY 2 1892



Witnesses:  
*Ramsey White*  
*R. W. Peterson*

Inventor:  
*Nicholas Bauer*  
 By *W. H. H. H. H.*  
*Charles Martin*

IN THE UNITED STATES PATENT OFFICE.

```

: : : : :
OERTLY      : :
vs.         : :
ALLEN       : :
vs.         : : INTERFERENCE No. 27,480.
SCHNIDER    : :
vs.         : :
PLATT       : :
: : : : :

```

PRELIMINARY STATEMENT OF EDWARD SCHNIDER.

STATE OF NEW YORK    }  
                           : ss:  
 COUNTY OF NEW YORK }

EDWARD SCHNIDER, of the city, county and State of New York, being duly sworn, deposes and says that he is a party to the interference declared by the Commissioner of Patents April 30, 1907, between his application for Letters Patent filed November 8, 1906, Serial No. 342,578, and applications of William Platt, Edward L. Allen and John Oertly; that he conceived the invention set forth in the declaration of interference on or about August 1, 1904; that he explained the invention to others on or about August 1, 1904; that he made no drawings and no model of the said invention; that he reduced the invention to practice about April 1, 1906 by making a full sized working apparatus embodying the said invention, and that the same was successfully operated in the city of New York on or about the first day of April, 1906; that the apparatus has been in continuous use since about October 1, 1906, and that only a few sets of apparatus embodying the invention have been constructed and used.

Subscribed and sworn to before me  
 this           day of May, 1907.

[ATTACHMENT]

This invention relates to safety devices for protecting moving picture films from fire, and it has for its object the provision of devices which will afford effective protection for a moving picture film between the supply reel and the take-up reel or box.

In recent years various forms of magazines or fire-proof boxes for the film reels of moving picture apparatus have come into use, and these magazines or boxes afford effective protection to all but that small portion of the moving picture film which lies between the upper film reel and the lower film reel or receiving box. While the quantity of film between the upper film reel and the lower reel on an ordinary moving picture machine does not ordinarily amount to more than two or three feet, it is desirable to provide safety devices by which the ignition of this film may be positively prevented, as even the small flame that would be caused by the burning of a few feet of film is often sufficient to cause a serious stampede in a place of public entertainment and, if the moving picture apparatus should be accidentally overturned, the ignition of this small amount of film might be sufficient to cause a conflagration.

In the accompanying drawings, forming part of this specification, I have illustrated one embodiment of my invention in connection with a well known type of moving picture apparatus, but it is to be understood that changes in the details of construction as well as in the form and exact mode of assembling the elements may be made without sacrificing the advantages of the invention and without exceeding the scope thereof.

In the drawings:

Figure 1 is a rear elevation of the apparatus provided with the improved safety devices for protecting the film.



[ATTACHMENT]

Figure 2 is a view in side elevation of the structure shown in Figure 1, with parts broken away for the sake of clearness of illustration, and showing the addition of the upper film magazine as well as the portion of the casing for the machine which is not shown in Figure 1.

Referring now to the drawings by the reference characters, 1 designates the base board of the moving picture apparatus and 2 designates the front board or face plate in which is mounted the lens 3. Most of the mechanism of the moving picture apparatus is carried by a rearwardly projecting frame 4 mounted on the front board 2 in suitable relation to the lens 3. The main driving shaft 5, shown in dotted lines in Figure 1, extends transversely of the frame 4 and carries the fly wheel 6 of the apparatus. Motion is imparted to the main driving shaft from the crank 7 mounted on one side of the frame and to transmit power from the shaft 7 to the shaft 5 a train of gearing, consisting of a gear 8, a pinion 9, a second gear 10 and a pinion 11, is employed. The elements of this train of gearing are so proportioned that the shaft 5 is driven at a much higher rate of speed than the crank 7 and rotation at a similar rate of speed is imparted to a shaft 12 carried by an upward extension 4a of the frame 4. The shaft 12 is driven by a train of gearing comprising the gear 8 and pinion 9 together with another gear 13 and a pinion 14. The shaft 12 carries sprockets 15 which engage with the film F, which is held in engagement with the sprockets by means of a pressure roller 16 of ordinary construction. The sprockets 15 and the pressure roller 16 form the upper or slack-producing film-feeding device by means of which the film is unreeled and from the upper film reel, as shown in Figure 2, drawn out of the magazine M, the bottom only of which is shown in the drawing. The lower film-feeding devices are driven from

[ATTACHMENT]

the shaft 5 and comprise sprockets 16 mounted on a shaft 17 near the bottom of the frame 4. In passing down to the sprockets 16 the film passes in front of a swinging door or back plate 18 carried on hinges 19 at the side of the frame 4. This door 18 is provided with a projection aperture 20 through which light passes from the lamp to the film and thence to the lens 3.

The parts of the apparatus illustrated and hereinbefore described are of common construction and form no part of the present invention, but are shown in the drawing and have been described to assist in making clear the nature of the present invention, which will now be described.

The principal and, in many cases, the only source of heat from which a moving picture film may become ignited is the lamp which forms a part of the apparatus. The intensity of the light required makes it necessary to use a lamp developing a high degree of heat, and the intensity of the heat produced by the lamp is so great that if the beams from the lamp are allowed to pass through the projection aperture 20 and fall upon the stationary film for a few seconds, the inflammable film is almost certain to become ignited. Furthermore, in the operation of moving picture apparatus, the maintenance of perfectly regular feed of the film is not always possible, and it often happens that a large loop of film will be formed between the upper feeding sprockets 15 and the upper film reel or magazine. A loop of film so formed hangs down at the rear of the apparatus, as it is highly flexible and not very resilient. A loop of film formed in this way and hanging down at the rear of the machine may, and often does, come into the area upon which very hot rays from the lamp fall. When this takes place, if the film is stationary or practically stationary

[ATTACHMENT]

for a very few moments, the ignition of the film is sure to follow. In like manner, the failure of the bottom reel or receiving box to take all of the film as it passes from the apparatus has sometimes resulted in the formation of an upwardly extending loop of film within the range of the lamp, where it soon becomes ignited if allowed to remain approximately stationary for a very few moments.

By means of the present invention, I have sought to eliminate the sources of danger to the film from the lamp by supplying guards which will prevent the formation of loops of film within range of the heat of the lamp and by providing the projection aperture with an automatically operative shield or out-off shutter by means of which the projection aperture is immediately closed whenever the operator ceases to turn the crank 7. The guards consist preferably of curved plates 21 and 22, respectively, attached to the top and bottom of the frame 24 on the rear surface, and preferably lined or faced on their concave surfaces with a layer of asbestos 23. The upper guard plate 21 extends upward into contact with or adjacent to the upper film magazine, if one be employed. The lower shield 23 extends downward adjacent to the base board 1, upon which the apparatus stands and through which the film F is ordinarily passed.

The shield or out-off shutter for the projection aperture is most clearly shown in Figure 1 and is designated 24. This shield or out-off shutter consists preferably of a small rectangular metallic plate with an arm 25 extending from one corner of the plate. The arm 25 is mounted on a short shaft 26 turning in a small bearing bracket 27 mounted on the rear surface of the door or back plate 18. The shaft 26 is rotated from a bevel gear 28 on the main driving shaft 5 through a small bevel pinion 29 carried by the shaft 26

[ATTACHMENT]

and held normally in mesh with the gear 28 by means of a spring 30, which is best shown in Figure 2. The arm 25 of the shield or out-off shutter is provided with a sort of hub 31 through which the shaft 26 extends and in which the shaft is free to turn. A certain amount of friction between the hub 31 and the shaft 26 is always produced when the shaft is rotated, and, to increase the friction on the hub 31, it is mounted between a pair of disks 32 secured on the shaft. Consequently, when the small bevel pinion 29 is rotated toward the left, or counter-clockwise, the frictional engagement of the hub 31 with the shaft and the disks between which the hub is mounted causes the shield or out-off shutter to swing out of the position shown in full lines in Figure 1 to that shown in dotted lines, in which it remains as long as the rotation of the small pinion 29 is maintained by turning the crank 7. As soon, however, as the turning of the crank ceases, a small adjustable counterweight 33, which is raised in the position shown in dotted lines in Figure 1 while the apparatus is in operation, becomes effective, overcomes the friction on the hub 31 and restores the shield or out-off shutter to the normal position shown in solid lines in Figure 1. The limitation of the movements of the shutter to the two positions indicated in Figure 1 is effected by means of a stop 34 set in the door 25 and cooperating with the sides of a notch 35 formed in the elongated circular end of the arm 25 of the shield.

From the foregoing description and the accompanying drawings it will be readily seen that the portion of the moving picture film between the two film reels of the moving picture machine is completely protected from the heating rays of the lamp except at the projection aperture when the apparatus is in operation and the rapid travel of the film is, of course, sufficient to protect it from ignition. When the

[ATTACHMENT]

turning of the crank stops, even if for only a moment, the slight friction between the shield or cut-off shutter and its supporting shaft is quickly overcome, allowing the cut-off shutter to drop substantially instantaneously into the position shown in solid lines in Figure 1. The guard plates 21 and 22 are mere static structures and have no operation, strictly so called. They serve, however, to shield the portion of the film both below and above the apparatus and are the most effective means for preventing the formation of large and unwieldy loops of film either above or below the film-feeding devices, in either of which positions it would be exposed to great danger of ignition from the lamp.

[ATTACHMENT]

Having thus described my invention, what I claim as new and desire to secure by letters patent is:

1. In moving picture apparatus, the combination with a shaft which is continuously rotated during the operation of the apparatus, of a film shield loosely mounted on said shaft and normally in position to protect the film from the rays of the projecting lamp, devices carried by the shaft for holding the shield to the shaft with sufficient friction to cause the shield to swing out of normal position when the shaft is turned rapidly but not sufficient to hold said shield out of normal position when the rotation of the shaft is stopped, and a stop to prevent the complete rotation of the shield, said stop being so placed as to permit the shield to turn completely out of its normal or film-protecting position.

2. In moving picture apparatus, the combination with a shaft which is continuously rotated during the operation of the apparatus, of a film shield loosely mounted on said shaft and normally in position to protect the moving picture film from the rays of the projecting lamp, devices carried by the shaft for holding the shield with sufficient friction to cause the shield to swing out of normal or film-protecting position when the shaft is rapidly rotated, a stop to limit the swinging of the shield when the shaft is rotated, and devices for overcoming the friction by which the shield is held to the shaft and returning the shield to normal position when the rotation of the shaft stops.

3. In moving picture apparatus, the combination with a shaft which is continuously rotated during the operation of the apparatus, a film shield loosely mounted on said

[ATTACHMENT]

shaft and normally in position to protect the film from the rays of the projecting lamp, devices for holding the shield to said shaft with sufficient friction to cause the shield to swing out of normal position when the shaft is rapidly rotated, a stop to limit the swinging movement of the shield, and an adjustable weight carried by the shield and adapted to overcome the friction by which the shield is held and to restore the shield to normal position when the rotation of the shaft stops.

4. In moving picture apparatus, the combination with a main driving shaft which is continuously rotated during the operation of the apparatus, a driven shaft, gearing between said driving shaft and said driven shaft, a film shield normally in position to protect the moving picture film from the rays of the projecting lamp, loosely mounted on said driven shaft and frictionally held thereon, a stop to prevent complete rotation of said shield with said driven shaft, and devices for restoring the shield to normal position when the rotation of said driven shaft stops.

5. In moving picture apparatus, the combination with a main driving shaft turning about a fixed axis, a movable back plate having a projection aperture through which rays pass from the projecting lamp to the moving picture film, a driven shaft carried by said movable backplate, a driving gear or pinion carried by said driving shaft, a gear or pinion carried by said driven shaft and adapted to engage the gear or pinion on the driving shaft when the movable backplate is in normal position, a film shield loosely mounted on said driven shaft and normally covering said projection aperture, devices for holding said film shield on said driven shaft with a small degree of friction sufficient

[ATTACHMENT]

to cause said shield to swing out of normal position when the driven shaft is rotated at the ordinary rate of speed imparted to it when the apparatus is in operation but not sufficient to hold the film shield out of normal position when the driven shaft is not in rotation, and a stop to arrest the movement of the film shield with the driven shaft when the film shield has swung entirely out of normal position.

6. In moving picture apparatus, the combination with a main driving shaft turning about a fixed axis, a movable backplate having a projection aperture, a driven shaft mounted on said movable backplate, a driving gear carried by said main driving shaft, a second gear carried by said driven shaft, means for yieldably pressing the gear on the driven shaft into engagement with the gear on the driving shaft when the backplate is in normal position, a film shield loosely mounted on said driven shaft and frictionally held thereon with sufficient friction to cause the film shield to swing out of normal position when the driven shaft is rotated at the ordinary speed developed when the apparatus is in operation but not sufficient to hold the shield out of normal position when the rotation of the driven shaft ceases, and a stop to prevent complete rotation of the film shield with the driven shaft, said stop being so placed as to permit the film shield to turn completely out of its normal position.

7. In moving picture apparatus, the combination with film feeding and guiding devices, of guard plates extending rearwardly from the upper and lower portions of the film feeding and guiding devices, the upper guard plate being extended upwardly as well as rearwardly and the lower guard plate being extended downwardly as well as rearwardly, and



[ATTACHMENT]

both guard plates being adapted to prevent the formation of loops of the moving picture film within the field of the projecting light.

-73-

-10-

[ATTACHMENT]

Room 312,

Application of EBERHARD SCHNIEDER,

SAFETY DEVICES FOR PROTECTING MOVING PICTURE FILMS FROM FIRE.

Filed Nov. 8, 1906.

Serial No. 342,578.

HON. COMMISSIONER OF PATENTS,

Sir :

In response to the official letter of December 4, 1906, it is desired to amend the above-entitled case as follows:

Page 2, line 16, change "shaft" to crank.

REMARKS.

The Examiner is requested kindly to apply the reference characters 5 and 12 in Figure 2.

The dotted lines in Figure 2 represent portions of the structure of an ordinary moving picture machine which do not constitute part of the present invention and hence have not been described.

The guard plates 21 and 22 do not "prevent the formation of loops," but do prevent the formation of loops within the field of the projecting light. Of course, failure of the film-feeding mechanism to work properly will cause the formation of loops of the film in spite of the presence of the guard plates 21 and 22, but the guard plates do prevent the formation of the loops within the field of the projecting light, and hence prevent the ignition of the film which would inevitably follow if a loop of it should extend into the field of the projecting light.

It is hoped that with the above explanations the features of the invention not understood by the Examiner will be made clear and that the application will be found ready for

[ATTACHMENT]

allowance.

Very respectfully,

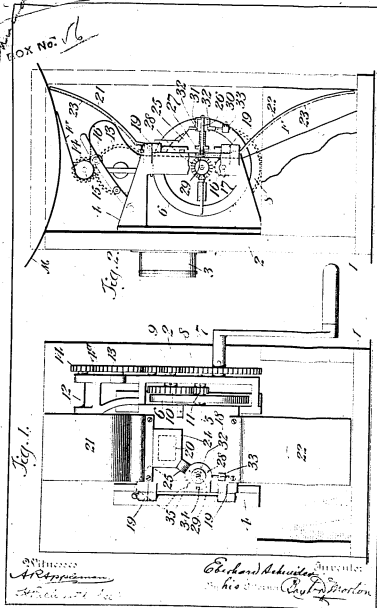
EMERHARD SCHNIEDER.

By

Attorney.

New York, Dec. 15, 1906.

[ATTACHMENT]



[ATTACHMENT]

Room 312

Application of EBERHARD SCHNEIDER

SAFETY DEVICE FOR PROTECTING MOVING PICTURE FILMS FROM FIRE

Filed Nov. 8, 1906

Serial No. 342,578.

HON. COMMISSIONER OF PATENTS

Sir :

In response to the official letter of December 31, 1906 and the official letter of February 15, 1907, it is desired to amend the above-entitled application as follows:

Change Claim 7 to read as follows:

7. In moving picture apparatus, the combination with film-feeding and guiding devices, of guard plates for the film which extend respectively upwardly and rearwardly and downwardly and rearwardly from the film-feeding and guiding devices and prevent the exposure of the film to the projecting light except at the projecting aperture.

Add the following claims:

8. In a picture-projecting machine, the combination with the film-moving mechanism thereof, of a hinged door, the said door having a ~~side~~ <sup>upper</sup> opening therein, a gravity shutter normally closing said opening, film-protecting shields carried by the upper and lower edges of said door, and means actuated by the above-mentioned mechanism for raising said shutter.

9. In a moving picture machine, the combination with mechanism for moving the film, of a door protecting the said film, said door having an opening formed therein, a shutter normally closing said opening, and means actuated by the film-moving mechanism for operating said shutter.

[ATTACHMENT]

REMARKS.

Claim 7 as altered appears to avoid the objections noted in the official letter of December 31st and the statement in the last paragraph of the specification preceding the claims appears to be correct. The guard plates do prevent the formation of large and unwieldy loops of film, as stated.

Respectfully submitted,

BERNARD SCHNEIDER,

By

Attorney.

New York, Feb. 18, 1907.

[ATTACHMENT]

Room No. 312

Application of ERNEST SCHNEIDER

SAFETY DEVICES FOR PROTECTING MOVING PICTURE FILMS FROM FIRE

Filed Nov. 8, 1906

Serial No. 342,578

Honorable Commissioner of Patents,

Washington, D. C.

Sir:-

In response to the Official Letter of April 5, 1907,

it is desired to amend the above-entitled application, as follows:

Cancel claim 9.

R E M A R K S .

Claim 9 is cancelled as anticipated not only by the catalogue of "The Chas. Urban Trading Company", cited, but also by the catalogue of L. Gaumont & Co., 25 Cecil Court, Charing Cross Road, London, reference being had especially to the illustrations on page 4 and the description of "automatic cut-off" on page 5. This catalogue was issued in 1902. It is thought, moreover, that the cancelled claim is fully anticipated by British patent to May 10,047, of 1898, as the projection aperture shown in dotted lines in Figures 1, 4, 6 and 7 of the said patent is almost certainly formed in a door, and, whether this aperture is formed in a door or not, it is the full equivalent of an aperture formed in a door.

Respectfully submitted,

Ernest Schneider,

By

Attorney.

New York, April 11, 1907.

BH  
/s/

June 5, 1907

Baxter Morton, Esq.,

43 Broadway, New York, N.Y.

Dear Sir:--

I am enclosing you copies of preliminary statements of John Oertly and Edward L. Aiken, in Interferences No.27,479 and No.27,480, as requested in your letter of June 4th, which I received today. I thank you for the copies of the files and the preliminary statements of Platt and Schneider.

In accordance with our telephone conversation this morning, I shall expect to receive from you copies of the Office letters in the applications of your clients, Messrs. Platt and Schneider.

Very truly yours,

HED/MJL

enclosures



[ATTACHMENT]

IN THE UNITED STATES PATENT OFFICE.

O e r t l y	)	
vs.	)	
A i k e n	)	Interference "E"
vs.	)	No. 27,480
S c h n e i d e r	:	
vs.	)	
P l a t t	:	

PRELIMINARY STATEMENT OF JOHN OERTLY

State of Ohio )  
County of Hamilton) ss:

JOHN OERTLY, of Cincinnati, in the County of Hamilton, and State of Ohio, being duly sworn, doth depose and say:

That he is a party to the Interference declared by the Commissioner of Patents on April 30, 1907, between his application for Letters Patent filed April 24, 1906, serial No.313,385, for KINETOSCOPES, an application of Edward L. Aiken for KINETOSCOPES, an application of Eberhard Schneider for SAFETY DEVICE FOR PROTECTING MOVING PICTURE FILMS FROM FIRE, and an application of William Platt, for ATTACHMENTS FOR KINETOSCOPES, STEREOPTICONS AND MOTION PICTURE MACHINES.

Conception: That he conceived the invention defined by the Interference issue, in the early part of December, 1905 and before-----December 15, 1905

Drawing: That he first made a drawing of the invention defined by the Interference issue on or about-----December 25, 1905

Disclosure: That he first disclosed the invention to others on or about-----December 25, 1905

[ATTACHMENT]

I

Model:

That he made no model of the invention, as distinguished from a complete working machine----- None

Working Machine:

That he made two complete working devices which he attached to an Edison kinetoscope, as disclosed in his said application above identified, and thereby reduced the invention of the interference issue to practice, during the week ending ----- Feb.9,1906

Test of Machine:

That an Edison Kinetoscope as so equipped, was successfully operated by him at Cincinnati, in the County of Hamilton and State of Ohio, on or about-- Feb.10,1906  
and thereafter an Edison kinetoscope as so equipped was successfully operated by himself and others, at Orange, New Jersey, during the month of----- February,1906

Use and Sale:

That he has since continued to use Edison Kinetoscopes equipped with the said device, and he is informed and believes that machines embodying the invention of the Interference issue have been manufactured and used to the number of 100 and upwards.

Subscribed and sworn to before me

this    day of                      1907.

[ATTACHMENT]

I

*Aiken preliminary statement  
Adm. Copy -*

IN THE UNITED STATES PATENT OFFICE.

A i k e n	)	
	)	
vs.	)	Interference "D"
	)	
O e r t l y	)	No. 27,479
	)	
vs.	)	
	)	
P o w e r	)	

PRELIMINARY STATEMENT OF EDWARD L. AIKEN.

State of New Jersey )  
County of Essex ) ss:

EDWARD L. AIKEN, of Orange, in the County of Essex and State of New Jersey, being duly sworn, doth depose and say:

That he is a party to the Interference declared by the Commissioner of Patents on April 30, 1907, between his application for Letters Patent filed July 14th, 1906, serial No. 326,275, for KINETOSCOPES, and an application of John Certly for KINETOSCOPES, and an application of Nicholas Power, for FIRE SHIELDS FOR MOVING PICTURE FILMS.

Conception: That he conceived the invention set forth in the declaration of interference in the month of ----- April, 1906

Disclosure: That he <sup>first</sup> disclosed the invention to others in the month of ----- April, 1906

Model: That he made no model of the invention, as distinguished from a complete working device ----- None

Machine: That he made a complete working device which was a reduction to practice of the invention defined by the interference issue, and which he attached to an Edison Kinetoscope, as disclosed in his said ap-

[ATTACHMENT]

I

Machine (continued)

plication above identified, during the  
month of-----

May, 1906

Test of Machine:

That an Edison kinetoscope  
equipped with the said device was first suc-  
cessfully operated in the Town of West Orange,  
in the County of Essex, State of New Jersey,  
and in the City of New York, N.Y., during  
the month of-----

May, 1906

Drawing:

That a drawing was made under  
his direction, from the said machine, on

June 12, 1906

Use:

That he and others have since used  
Edison kinetoscopes equipped with said device  
so made during the month of May, 1906, but  
that the invention defined by the interference  
issue has not been commercially used except  
as hereinbefore set forth.

Subscribed and sworn to before me  
this        day of        1907.

June 14, 1907.

Messrs. Bacon & Milans,  
McGill Building,  
Washington, D.C.

Gentlemen:-

The following letter is being written in New York and my records are not accessible, and so you will have to overlook any little inaccuracies that may creep in. I think, however, that with the limited facts at my disposal, I can make it clear what I want.

I am thinking of moving to dissolve the interference in which the moving picture automatic shutter application of Aiken is involved with Moore and Armstrong and one other party, Morris and Laveen, I think. This is a second interference of <sup>you</sup> series in which you furnished me the preliminary statements a few days ago, and the number ends with 77, I think it is 27,477.

The Urban catalogue which <sup>was cited</sup> decided in the Aiken application shows a construction which is exactly that of the claim in the interference if the words "centrifugal" were omitted before "means" near the end of the claim, I think in the next to the last line. The claim calls for centrifugal means for operating a shutter which is upon the pivoted door. Centrifugal means for operating the shutter are well known, and shown in the patents which I have, and the machine of the Urban catalogue shows that the shutter on the door is old. There does not appear to be very much invention therefore in operating a shutter on the door by centrifugal means as is called for in the claim. The Urban shutter is operated

B. & M., #2. June 14, 1907.

by a pump, and I think that if I ~~define~~<sup>prove</sup> that some patents could be found which will show that a pump as an actuating device is a well-known equivalent of a centrifugally operating mechanical means for the same purpose, then I would be in a position to dissolve with some prospect of success.

I think you can find in the class of <sup>E</sup>ngine <sup>g</sup>overned patents which will show that such devices are the old and well-known equivalent of one another. Some time ago I remember taking out a patent for a man in Illinois which showed a device for governing an engine which comprised a pump actuated by the engine, a cylinder into which the pump operated to force a fluid, and a piston in the cylinder which rose or fell as more or less fluid was forced into the cylinder, and which piston in its rise and fall operated to exclude and <sup>omit</sup>~~omit~~ the steam to the engine.

I wish you would have a search made on this point and send me the patents which you find at once. Please also, at the same time, let me know when my time for making motions, such as motions to dissolve in this interference, will expire.

Very truly yours,

Frank Lloyd

June 18, 1907

Charles Turner Brown, Esq.,  
Unity Building, Chicago, Ill.

Dear Sir:--

Of the several interferences which have recently been declared relating to moving picture projecting machines, and in which an application of my client, Aiken, and one of your clients, Messrs. Moore & Armstrong, are involved, I am particularly interested in the first interference No.27,479. There are other interferences with other parties, but I regard the issues as either unpatentable, or I consider that my clients will prevail. I am frank to say, however, that in interference No.27,476, provided Messrs. Moore and Armstrong can substantiate their preliminary statement, they will undoubtedly succeed. Under these circumstances it would be necessary, therefore, for us to change our construction, which I understand can readily be done, so as to avoid the claim, or to purchase the Moore & Armstrong case.

I regard the application of Moore & Armstrong as of value only because of the fact that the claim of the issue covers the specific construction adopted by my clients, but I do not consider the matter as of vital or serious importance.

CTB--2--June 18, 1907

I would be glad to have you put the matter before your clients and find if they would be disposed to sell their application for a reasonable figure, say in the neighborhood of five hundred dollars, or if some other arrangement could be made. Possibly, if they are manufacturers of moving picture apparatus, it could be arranged so that they could have a license under the patent, or if they wish to retain control of the patent, arrangements might be made for granting a license to us. At any rate I wish you would give this matter your early attention, so that I may be guided as to the future.

In the second interference No.27,477, I propose in the course of a few days to send you a motion for dissolution, as I regard the issue as plainly unpatentable.

Very truly yours,

RHD/MJL



L. S. BACON,  
ATTORNEY AT LAW.

J. H. MILANS,  
ATTORNEY AT LAW.

BACON & MILANS,  
ATTORNEYS AND SOLICITORS IN PATENT CAUSES,  
NO. 908 G STREET, NORTHWEST.  
(ROOMS, 410-415.)

CABLE ADDRESS, "BACON."  
LONG DISTANCE TELEPHONE.

WASHINGTON, D. C. June 18, 1907.

Frank L. Dyer, Esq.,

Orange, N. J.

Dear Sir:-

Referring to the search which you requested us to make with reference to the interference in which the automatic kinesiograph shutter application of Aiken is involved, we would state that we have examined the classes of steam engine governors and have found that it is exceedingly common in that art to employ in lieu of the ordinary centrifugally operated governor, an air pump which is driven by the engine and a device controlled by said air pump for regulating the admission of steam to the engine, in fact, there is a very large class devoted entirely to pressure operated governors. We have selected a number of patents illustrating governors of this type and are sending copies of these patents herewith. These patents are Nos. 992,923, 549,815, 206,849, 7,272, 774,892, and 192,273. We have also selected a number of patents illustrating the well known form of centrifugally operated speed governors which <sup>per</sup>form the same function as the fluid operated governors disclosed in the patents above referred to. These patents are Nos. 177,807, 120,982, 108,162, reissue 10,559, 538,412, 532,548, copies <sup>per</sup> *Brain* *26/*

000721

of all of which are sent you herewith.

We have practically confined our search to the various classes of engine governors as we understood that you merely desired us to find in some art some illustrations showing a pump as an actuating device to be the equivalent of centrifugally operating mechanical means for the same purpose and as the patents referred to herein seem to show this idea, we have thought it best to report without proceeding any further with the search. We could, of course make a much more extensive search should you deem it necessary.

While as stated above, we have practically limited our search to the class of steam engine governors, we had occasion to examine the file of several kinesiograph patents and found referred to therein two British patents both of which disclose centrifugally operated means for normally holding a kinesiograph shutter in an open position during the traveling movement of the film, namely 10,047 of 1898 and 22,423 of 1902, and while you are doubtless familiar with both of these patents, we have thought it well to refer to them in the event that you may not know of them.

Very truly yours,

Dic. H-K.

*Bacon & Millans.*

June 18, 1907

Messrs. Bacon & Milans,

908 G- Street, Washington, D.C.

Gentlemen:--

A few days ago when I wrote you about making the search in the moving picture interference, I assumed that the Urban door was hinged to the main frame. But on closer examination of the drawing in the Urban catalogue, it appears to be very doubtful whether the door is hinged.

I would like to have a patent of as early a date as possible to use in making the motion, which shows that the hinged doors are old. Please run through the projecting machine patents and pick me out a few which show this feature.

Very truly yours,

RHD/MJL

PATENT, TRADE-MARK  
AND COPYRIGHT CAUSES  
A SPECIALTY.

Telephone, Market 1210.  
Automatic 2824.

CHARLES TURNER BROWN,  
ATTORNEY AT LAW  
838-850 UNITY BUILDING,  
79 Dearborn Street

UNITED STATES AND  
FOREIGN PATENTS  
OBTAINED.

CHICAGO, ILL., June 22, 1907.

*Dyer*  
Frank L. Dyer, Esq.

Orange, N. J.

Dear Sir;

Replying to your favor of the 18th inst. in re, interferences No. 27,479, and 27,476; Mess. Moore & Armstrong, vs. others.

I have had interviews with my clients and am authorized to say;

Messrs Moore and Armstrong have made use of the device by attaching it to an Edison moving picture machine, when requested by users of the machine.

They are not making a picture moving machine; but would not like to so part with the invention as to prevent them from connecting it to a picture moving machine of their own manufacture, in case they should ever decide to make one.

A shop license would cover all they would require.

They will sell the application for \$700.00 with a shop license, as above outlined, to be given back to them.

If the application is purchased by your client they will produce the testimony to support their preliminary statement in either or both of the cases, on your request. I assure <sup>you</sup> the testimony is more than sufficient.

Please advise me or your decision.

Yours truly,

*Charles Turner Brown.*

July 5, 1907.

Charles Turner Brown, Esq.,  
79 Dearborn Street,  
Chicago, Ill.

Dear Sir:-

Yours of the 22nd ult. was duly received in reference to the Moore & Armstrong matter. The price asked for the application is, in my opinion, too high in view of the circumstances. The business is not very important any way, and the invention ~~is~~ of a detail character. Furthermore, the prior art is sufficiently comprehensive to make it possible for any one to use a practicable device for the purpose, so that it would be out of the question to attempt to control or monopolize the business. As I wrote you, the only value to my clients of the Moore & Armstrong application, assuming a termination of the interference in your clients' favor and the grant of the patent to them, would be to do away with the expense of changing our apparatus. Under these circumstances, a license or shop-right would be enough for our purpose. I will be obliged if you will take up this matter with your clients and ascertain whether they would be willing to grant

No. 2 - C.T.B.

us a license, and if so, what their very lowest figure would be. If this were done, they would still have the patent, could manufacture the device themselves, and could license others. In addition to this, I wish you would let me know the very lowest figure at which they would sell the application, reserving a shop-right to themselves.

Yours very truly,

FLD/ANK.

BOX No. 56

IN THE UNITED STATES PATENT OFFICE.

Platt	)	
vs.	)	
Morris, et al	)	Interference No. 27,477 "B"
vs.	)	Before the Honorable Primary Examiner
Aiken	)	In Room No. 312.
vs.	)	
Moore, et al	)	

AIKEN'S BRIEF ON MOTION FOR DISSOLUTION.

This is a motion for dissolution of the above entitled interference, and we propose to show that in order to include subject-matter common to each of the several applications involved, the issue has been made too broad to be patentable over the prior art. The claim of the issue is as follows:

" In a kinetoscope, the combination of a main frame provided with means for imparting a progressive movement to a film, an auxiliary frame or gate hinged thereto, a movable shutter carried by said gate and adapted to cut off the projecting light from the film, and centrifugal means for operating said shutter, substantially as set forth."

- The principal reference relied on is the catalogue of the Charles Urban Trading Company, Ltd., 48 Rupert St., London, England, of April 1906, and the affidavits of William H. Mack and Orville T. Weiser relating to the

said catalogue and on file in the United States Patent Office. That this catalogue and the said affidavits constitute a valid anticipating reference for anything disclosed therein has already been admitted by each of the parties to this Interference, with the exception of Aikon, as each such party has canceled a claim from the respective application involved in this interference on rejection upon the said catalogue and affidavits. As to the actual prior use in this country of the anticipating structure shown in the catalogue, the affidavit of Mack states:

" In the year 1902 I used at Keith's Bijou Theatre in Philadelphia, an Urban life motion picture projecting machine shown in the catalogue entitled on the fly leaf 'Urban Bioscope and Accessories'".

The Urban projecting machine on page 29 of the catalogue referred to, is shown in two views, different reference characters being unfortunately used to designate the parts of the machine in these views, so that confusion would be likely to result if it were attempted to designate the parts by reference characters. It may be stated generally, however, that this machine comprises a main frame and means for imparting a progressive movement to the film. A portion of the main frame is provided with an aperture for the passage of the projecting light, and with guides by which the film is guided as it moves over the said aperture. Cooperating with this portion of the main frame is a movable door which is provided with bow-springs to control the movement of the film. This door is likewise provided with an aperture corresponding to that in the main plate, and upon this gate or door is a movable gravity shutter which normally



closes the opening in the door, but which may be raised to uncover the said opening by means of a piston working in a cylinder upon the door, into which cylinder air is forced under pressure from a small piston pump situated upon the machine frame and actuated from the film moving mechanism, there being a flexible connecting tube between the said pump and cylinder.

It is evident that this disclosure falls short of showing the construction set forth in the claim of the issue in two particulars, the first of which is that it is not clear that the door or gate is hinged to the main frame. But this is immaterial both because no more than an ordinary mechanical expedient would be involved in hinging the door, and because it has for a long time been common to hinge precisely similar doors upon the main frame of moving picture projecting apparatus, as is shown, for example by the patent to Mc Millan, et al, No. 628,413, granted July 4, 1899 and the patent to Chronik, et al, No. 627,952, granted June 27, 1899. The other difference between the disclosure of the catalogue and affidavits and that of the claim is that, while the Urban shutter is actuated by means of a pump, in the construction called for in the claim of the issue a "centrifugal means" for actuating the shutter is set forth.

Obviously in any art where an element is to be moved or actuated by changes in speed of a driving part, the commonest expedient known to mechanics is a centrifugal device, as for example, the governors of steam engines, sparking devices for gas engines, and safety apparatus for elevators and kindred mechanisms. In providing a special device for this purpose, the Urban machine adopts a less usual expedient but nevertheless one

that has long been recognized as a well-known substitute for a centrifugal device.

The patents to Moy, et al, No.10047, May 2, 1898 (English); English patent No.22423 of 1902, and the French patent to Richard, No. 326,568, dated November 21, 1902, each show a centrifugal means for actuating the film protecting shutter of a projecting machine.

Now disregarding the hinge on the door, which is immaterial, it is plain that the claim of the issue would be readable upon the Urban structure, if the word "centrifugal" before " means for operating the shutter" were omitted. The claim does not differentiate from the Urban structure except by the insertion of the word "centrifugal" before the word "means". There is no statement of any change of structure in order to use the centrifugal means rather than other means. There is no statement that the centrifugal means is located on the door along with the shutter, or that the centrifugal actuating means is located on the frame and connected with the door in such a way that the shutter may be actuated and the door may still be opened. The only statement made in the claim is that the shutter is on the door and that it is actuated by centrifugal means. The claim, therefore, covers in the broadest possible form the substitution of the centrifugal actuating means, shown in the English or French patents cited, for the pump of Urban.

The pump and centrifugal operating means were each old in this particular art and for the same purpose. They were, therefore, the mechanical equivalents of one another. Anybody familiar with both the Urban camera and the English and French patents referred to would know that

for actuating the film protecting shutter of a moving picture machine, he might use either centrifugal means, or a pump. Anyone starting out to design a film protecting shutter must have known that he could use either a pump for actuating the shutter or a centrifugal means, such as a centrifugal governor, since an inventor is conclusively presumed to have known all about the prior art, and for this reason when a claim is presented which covers nothing more than the substitution of a centrifugal means for the pump, such a claim could not be patentable.

Again, not only is it a well known fact in this art that centrifugal operating means and pumps are mechanical equivalents of one another, but it is also true in other arts, as for example in engine governors. Everyone is familiar with the ordinary centrifugal engine governor, but there is a whole sub-class of engine governors in the Patent Office in which the valve for the admission or exclusion of compressed fluid to the engine is controlled by a pump, which in turn is operated by the engine. The following patents have been placed in this record to show the equivalence of pumps and centrifugal means: Bricksen, No.592,529, October 26, 1897; Yount, No.206,849, August 6, 1878; Gray, No.592,248, October 26,1897; Nash, No.192,273, June 19,1877, and Deefrees, No.97,056, November 23, 1869.

Accordingly a claim whose only possible novelty lies in the broadly stated substitution of a centrifugal means for a pump, cannot be patentable, as pumps and centrifugal means are well known mechanical equivalents, both in the projecting machine art and generally.

The inventions in the applications involved in the present interference lie in the particular means which each of the interferents has designed for operating the shutter from the centrifugal means, and not in the mere fact that centrifugal means are used instead of a pump or other means. The claim of the issue is, therefore, too broad.

Take now a slightly different point of view. No one would for a moment contend that a piston pump and the well-known centrifugal pump are other than mechanical equivalents, except perhaps in certain specific relations which would have to be specifically set out in order to be patentable. Suppose someone should substitute a centrifugal pump such as that shown by Deefrees in Patent No. 97,056 already referred to, for the pump of Urban. It is to be noted that Deefrees pump is used for the same purpose as the Urban pump: to force air into a cylinder, behind the piston F, and thereby move the piston rod longitudinally to open and close a valve. Then suppose the person making this change were to make an application for a patent and to present to the Patent Office for allowance the exact claim of this interference issue; such a claim would clearly describe his structure, since a centrifugal pump is certainly one form of "centrifugal means". Surely the Examiner would hold that it would be immaterial, broadly, what sort of pump were used, and that the claim based on that structure would be unpatentable in view of the Urban catalogue. In view of this fact a claim for a centrifugal means, which is broader than a claim for a centrifugal pump, would certainly also be unpatentable.

- R E S U M E -

The claim of the issue is too broad to be patentable.

The invention lies in the features of construction of the different interferants and not in the broad fact that they use a centrifugal means instead of a pump or other means.

Centrifugally operating devices and pumps are well-known mechanical equivalents in general, as is shown in the art of steam engine governors, and it is entirely a matter of choice for the mechanic which he shall use.

Centrifugal means for actuating the film protecting shutter of a kinoscope are old, and also other means, as for example, a pump, and it requires no invention, broadly, as it is claimed here, to substitute the one means for the other.

There could not possibly be any invention in substituting an ordinary centrifugal pump for a piston pump, and the claim of the issue is sufficiently broad to cover the substitution of a centrifugal pump for the piston pump of Urban.

Respectfully submitted,

---

Attorney for Aiken.

Orange, New Jersey

July

1907.

BAXTER MORTON  
COUNSELOR AT LAW  
42 BROADWAY  
NEW YORK

August 22, 1907.

Frank L. Dyer, Esq.,  
Orange, N. J.

Dear Sir:-

RE: INTERFERENCE - PLATT VS. SCHNEIDER VS.  
AIKEN VS. GERTLY.

As the time allotted Platt for taking his proofs in chief in the above-entitled interference has almost expired, I take it that there is very little likelihood that any proofs will be taken on Platt's behalf. My client Schneider being next in order of assignments for taking testimony, I have taken up the case for consideration and have come to the conclusion that the issue as defined is certainly not worth a contest. The reasons for this conclusion are: (1) because the issue is a bald aggregation, the film-protecting shields carried by the upper and lower edges of the door being wholly independent in operation of the gravity shutter which is also carried by the doors; (2) because the claim would be of no value, even if valid, because it would be avoided by simply doing away with the shield at one end of the door, which, as you probably know, is the common practice; and (3) because the claim is anticipated in substance by the Warwick Trading Company's catalogue in the possession of the Patent Office, taken together with patent to Nicholas Power, No. 246,124, July 27, 1906, which shows the lower portion of the door extended downward to form a shield.

In view of the above-recited situation, I propose that in the event of Platt's taking no testimony, and thereby being out of the contest, we agree mutually to cancel this claim on behalf of our respective clients. If you will do this, or agree to an interchange of licenses, I think we can easily settle the entire interference to mutual advantage. In this connection I would say that, assuming that your dates as set up in your preliminary statements can be proved, I believe that my clients would probably prevail in any interferences involving patentable subject-matter common to their applications and those of your clients. Their feeling about these interferences, however, is like my own, namely, that the issues are not of sufficient importance to justify the expense of a contest.

Kindly let me have an expression of your views of the matters above presented at your early convenience. And oblige,

Yours very truly,

BM/M

*Baxter Morton*

Aug. 24, 1907

Baxter Morton, Esq.,  
42 Broadway, New York, N.Y.

Dear Sir:--

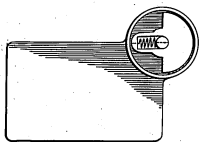
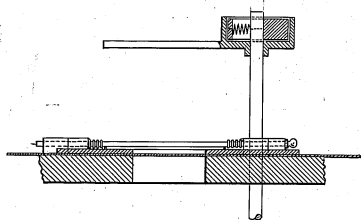
Your favor of August 22 has been received. As you know, Mr. Dyer is away and our action in this matter will have to wait on his return.

I have ordered a copy of the patent to Power, No. 826,112, to which you refer. Can you not let me know what is the substance of the disclosure in the Warwick Trading Company's catalogue, which you refer to in your letter, so that we may have the same light on this subject as is in your possession when we take the matter up for final consideration, and oblige-

Yours very truly,

HHD/MJL

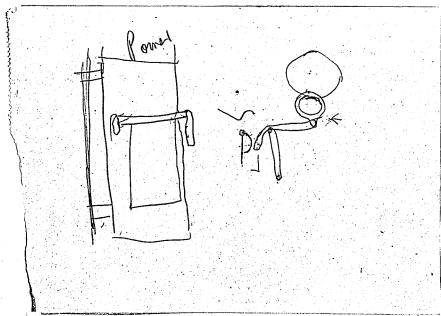
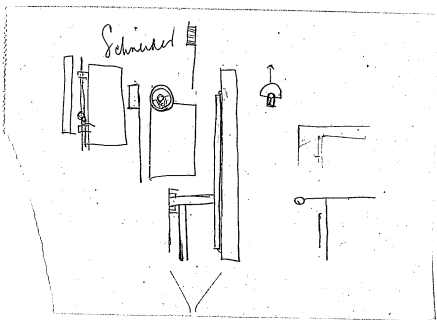
Two technical sketches of mechanical components. The top sketch shows a side view of a device with a horizontal base, a vertical rod, and a spring mechanism. The bottom sketch shows a top-down view of a rectangular component with a circular feature on the right side.



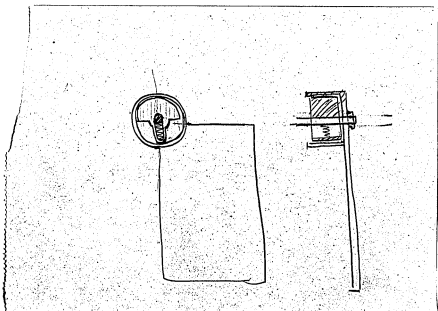
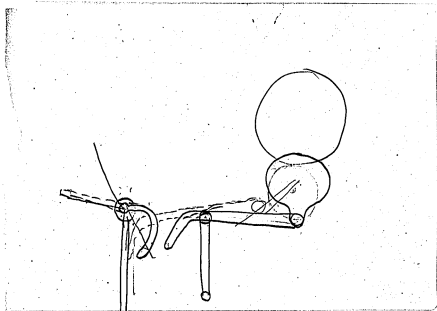
Sketch of Mch  
made by Schneider  
9/11/07 A. A. Dyke  
F. D. K.



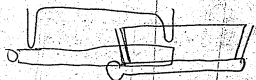
[ATTACHMENT]



[ATTACHMENT]



[ATTACHMENT]



infringers.

In preparing these papers I have followed as closely as possible the lines of our previous correspondence, and the papers seem to me to be in proper form. Of course, if either you or Messrs. Moore and Armstrong find anything in these papers not to your satisfaction, I will be glad to have you point out any such features and will

Sept. 23, 1907

Charles Turner Brown, Esq.,  
Unity Building, Chicago, Ill.

Dear Sir:--

Enclosed I am handing you carbon copies of the assignment to be signed by Messrs. Moore and Armstrong; license or shop-right granted back by the Edison Manufacturing Company, assignee, to Moore, Bond & Company, and embodying the suggestions contained in your letter of June 22, 1907, and copy of an agreement between Messrs. Moore and Armstrong, and the Edison Manufacturing Company, by which Moore and Armstrong agree to furnish evidence necessary to obtain a patent and sustain its validity when obtained, and the Edison Manufacturing Company agree to prosecute interferences in the Patent Office and to sue infringers.

In preparing these papers I have followed as closely as possible the lines of our previous correspondence, and the papers seem to me to be in proper form. Of course, if either you or Messrs. Moore and Armstrong find anything in these papers not to your satisfaction, I will be glad to have you point out any such features and will

CTB--2--Sept.23rd, 1907

give them full consideration. As soon as you notify me that the papers are satisfactory, I will have them executed so far as that can be done here, and forward them to Chicago with check for seven hundred dollars as agreed upon.

Very truly yours,

HWD/HJL

enclosure

PATENT, TRADE-MARK  
AND COPYRIGHT CASES  
A SPECIALTY.

CHARLES TURNER BROWN,  
ATTORNEY AT LAW  
838-839 UNITY BUILDING,  
7 Dearborn Street

Telephone, Market 1485.  
Automatic 323.

UNITED STATES AND  
FOREIGN PATENTS  
OBTAINED.

CHICAGO, ILL., Sept. 28, 1907.

Hon. Frank L. Dyer,  
Gen'l Counsel, etc.,  
Edison Manufacturing Company.  
Orange, N. J.

Dear Sir;

Yesterday I received your favor of the 23rd inst., with papers in the Moore Armstrong matter.

The assignment and agreement are all right.

With regard to the license there are two points which Mr. Moore desires me to call your attention to. First; Moore, Bond and Co., do not own their factory and may be compelled to move in the future. Secondly, - they have had a number of Edison machines brought to them to attach this protecting device to; and in fact have bought Edison machines of your Chicago office and attached the device to them and then sold the machines. The placing of such device on the machine giving the preference of sale to them.

I suggest therefore, lines 14 and 15, page 2 should read, - named, at its factory in the City of Chicago, and in no other place or places, such factory now located at Nos. 104-8-8 Franklin Street, (and if the location thereof be changed immediate notice of such change is to be given to the said Edison Manufacturing Company by said Moore, Bond & Co.).

Page 3, line 5, insert after "projecting machines", -- except that the said Moore, Bond & Co., may make the machine now and heretofore made by it and attach the same on Edison Machines owned by purchasers and brought to said factory of Moore, Bond & Co. therefor by said purchasers.

I will send history of machine to *you* *to-morrow*  
*Yours truly*  
*Charles Turner Brown.*

Telephone, Market 1216.  
Automatic 255.

PATENT, TRADE-MARK  
AND COPYRIGHT CASES  
A SPECIALTY.

CHARLES TURNER BROWN,  
ATTORNEY AT LAW  
838-839 UNITY BUILDING,  
77 Dearborn Street

UNITED STATES AND  
FOREIGN PATENTS  
OBTAINED.

CHICAGO, ILL., Oct. 4, 1907.

Frank L. Dyer, Esq.,  
Orange, N. J.

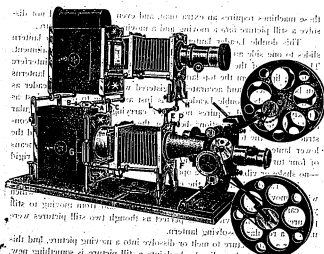
Dear Sir;

In reply to your favor of the 1st inst. I have carefully examined my letter of June 22, and can see how you infer as stated in your letter; but if you will read my letter in connection with yours of the 18th June and 5th July, (07) and the facts as I will endeavor to place them before you, you will see that our intention was to reserve all I now ask. And it seems to me as a business proposition it is not detrimental to your clients. I would ask you to refer the matter to them as a business proposition before making your final decision in this regard.

Your clients make the Universal and the Exhibition moving picture machine. You do not place this film protecting device on your Universal machine. Reference to your purchase and sales department will show the Moore Bond & Co., corporation, are buyers of both machines of you; and that their purchases of the Universal are as 9 to 1 compared with their purchases of the Exhibition machine. Pages 41 and 42 of their <sup>(enclosed)</sup> catalogue show what they do. Now, if you put the protecting device on the Universal machine the concession to them will be of no value; and if you stop the output of the Universal it will be of no value. But if you continue to sell the Universal moving picture machine without the film protecting device they, (Moore-Bond Co), can promote the sale of it together with the sale of their lanterns, by the concession; and that is why they have expected to retain the right. Of course your price is not so high on the Universal; but so long as you have it on the market we suppose you want to sell it.

*Yours truly, Charles Turner Brown.*

[ATTACHMENT]



**EDISON MOVING PICTURE MACHINE AND DOUBLE LEADER LANTERN**

The only double lantern with which still pictures can be dissolved into moving pictures.

This cut shows a double dissolving leader lantern with the Edison moving picture machine. There is a growing demand for a combined double dissolving lantern and a moving picture machine. This combination is being adopted by the most successful exhibitors and lecturers. The serious objection, however, has been, that the top reel of the moving picture machine obstructed the light from the top lantern so it could not be used when the moving picture machine was in position. Therefore, there was always a wait or delay in changing from the still to the moving and from the moving to the still pictures. In order to avoid this delay, exhibitors and lecturers have been compelled to carry double dissolving lantern and a separate moving picture outfit. To successfully operate



[ATTACHMENT]

these machines requires an extra man, and even then you could not dissolve a still picture into a moving and a moving into a still picture.

This double Leader lantern is so constructed that the top lantern slides to one side and remains in that position during the entertainment. The top reel of the moving picture machine therefore *cannot* interfere with the light from the top lantern. The fields from the two lanterns can be as quickly and accurately registered with this style of Leader as with the regular double Leader—it is just as simple to operate, just as quickly set up and, requires no larger carrying case than the regular double lantern. Connections between the two lanterns are so constructed that the top lantern is firmly bound to the lower lantern and the lower lantern is rigidly secured to the hardwood baseboard by means of four turn-buckle hooks. The combination is therefore firm and rigid—no shake or vibration while operating.

The Leader lantern is the only practical double lantern to combine with a moving picture machine and is the only lantern made with which you can dissolve from still to moving pictures and from moving to still pictures. The dissolving is as perfect as though two still pictures were used in a regular dissolving lantern.

For a still picture to melt or dissolve into a moving picture, and this moving picture again to dissolve back into a still picture, is something new. The effect is novel, interesting and beautiful. Since slides form an important part of the entertainment, an exhibitor with this style of an outfit will certainly have an advantage over the exhibitor who has the regular single lantern outfit. We would specially recommend this dissolving outfit to those who remain more than one night in a place or who expect to stay, return dates. If you do not care to purchase a double Leader lantern to begin with, buy a single Leader and later on you can add the top lantern.

For general description, see Edison Moving Picture Machine and Single Leader Lantern.

Price—Edison Moving Picture Machine, and Double Leader Lantern for calcium light.....\$175.00

For electric light.....\$188.00

Both calcium and electric lights.....\$198.00

Instructions for setting up and operating sent with each outfit.

Oct. 10, 1907

Charles Turner Brown, Esq.,  
Unity Building, Chicago, Ill.

Dear Sir:--

I have your favor of the 4th inst., and have talked over the matters discussed therein with my clients, and they say that there will be no objection to Moore, Bond & Company equipping the "Edison Universal" Moving Picture Projecting Machines with the film protecting mechanism. We are therefore willing to concede to Moore, Bond & Company the right to equip this type of machine with this film protecting apparatus, although as stated in my last letter I do not consider that this is a right which was reserved in the sale of the Moore & Armstrong application. I judge from your letter and the accompanying catalogue that such an arrangement will answer the purpose of your clients, and I am therefore enclosing a copy of the license embodying this provision. I have made some other slight changes to improve the form of this document, but this is the only change in substance.

I hope that the papers are now in form satisfactory to your clients so that the matter may be closed up without further delay.

CTB--2--Oct.10-1907

You promised me a history of the Moore & Armstrong case some time since, but I have not yet received it. Please let me have this history at once so that I can determine what action to take in the Interferences already declared.

Very truly yours,

HHD/AML  
enclosure

General Counsel.

Telephone, Market 1208.  
Automatic 2624.

PATENT, TRADE-MARK  
AND COPYRIGHT CAUSES  
A SPECIALTY.

CHARLES TURNER BROWN,

ATTORNEY AT LAW  
838-839 UNITY BUILDING,  
79 Dearborn Street.

UNITED STATES AND  
FOREIGN PATENTS  
OBTAINED.

CHICAGO, ILL., Oct. 12, 1907.

Frank L. Dyer, Esq.,

Counsel, Edison Mfg Co.

Orange, N. J.

Dear Sir;

I enclose the assignment and agreement, also a brief history of the invention, in the matter of the Film Protecting device of Messrs Moore and Armstrong/

The license received to day be me is all right, and a copy signed and executed will, I suppose accompany your next remittance.

Yours truly,

*Charles Turner Brown.*

[ENCLOSURE]

History of the invention by William B. Moore and Thomas H. Armstrong, of the Film Protecting device on Moving Picture Machines set out in their joint application for Letters Patent of the United States, filed June 25, 1906, serial No. 323,270.

William B. Moore is the manager of the Moore-Bond & Co., a corporation, etc., and was the manager of the Stereopticon and Film Exchange, (predecessor of Bond & Co.), from the first organization of such company.

Thomas H. Armstrong is the foreman of the shop of said Moore-Bond & Co., and its predecessors (has been foreman for the last seven years.)

About the first of November 1904, Mr. George Price, (then an exhibitor) called Mr. Moore's attention to the film protecting device shown by a cut in the catalog of a foreign dealer, (name not now at hand) and exhibited such catalog and the cut of the device to Mr. Moore.

Mr. Price had been prior to that time an employee of the Stereopticon and Film Exchange, working for such company for more than six months.

Mr. Moore stated to Mr. Price at this time, "I don't think that is a good mechanical construction; I think we can get up a better thing than that."

Mr. Moore called Mr. Armstrong's attention to the making of a film protecting device, and outlined the needs of the device, the automatic feature, the making of a machine which could be attached to the Edison machine principally, but also to other machines, the economy of room desired, and the use of centrifugal force and friction.

[ENCLOSURE]

Mr. Armstrong was shown the cut, and he made suggestions. It was decided between Messrs Moore and Armstrong at that time that a thin metal disc moving between the right of the stereopticon and the opening of the moving picture machine and operating automatically should be made by them; and some sketches of parts were then made, (these sketches were not preserved):

Several interviews between Messrs Moore and Armstrong on this subject occurred between the middle of November and about the first of December 1904, and a drawing of the machine as first made was completed about the first day of December 1904, a copy of such drawing is attached hereto as exhibit A. The original drawing was not preserved.

The construction of this machine was delayed owing to other demands on the shop; and to the frequent discussions between Moore and Armstrong during the month of December, and was not completed until the middle of January 1905. This first machine is not now in existence.

The parts of the machine were made by Mr. Armstrong and the machine, as it progressed was in view of all the workmen in the shop, and some of the test~~ing~~ of it were seen by them, but were not seen by outsiders. The workmen who were then in the employ of the Stereopticon & Film Exchange and who saw it were Albert Repinsky, Rudolph Geister and Robert Armstrong.

The several parts were made, the machine put together and operated on the 14th day of January 1905.

The operation of this machine was in the dark room of the Moore-Bond & Co., on the same floor as the shop in which it was made, and was in the presence of George W. Bond, William B. Moore and Thomas H. Armstrong.

[ENCLOSURE]

The operation of the machine was repeated several times a day for many days in the month of January and February, 1905.

The string was placed in the machine as a substitute for flat spring ribbons.

The next machine was completed on or about the last of March 1905 and closely resembled the one now made by the Edison Manufacturing Company.

The next machine made was like Exhibit B to statement of Moore and Armstrong enclosed; and was completed about January 1, 1906.

These last machines were seen by the employees named and others, at the time of their completion; and several of the last named machines were made before the pending application for Patent was filed.

*William B. Moore*  
*Thomas H. Armstrong*  
*In the presence of*  
*Charles Turner Brown*  
*Anna M. Fay*

- A S S I G N M E N T -

WHEREAS, we, WILLIAM B. MOORE, a citizen of the United States and a resident of Chicago, in the County of Cook and State of Illinois, and THOMAS H. ARMSTRONG, a citizen of the United States and a resident of Chicago, in the County of Cook and State of Illinois, have invented certain new and useful improvements in MOVING PICTURE MACHINES, for which we have applied for Letters Patent of the United States, the application papers therefor having been executed by us on the 23rd day of June, 1906 and said application having been filed in the Patent Office on June 25, 1906 and serially numbered 323,270, and

WHEREAS, the EDISON MANUFACTURING COMPANY, a corporation organized and existing under and by virtue of the laws of the State of New Jersey, and having its principal office at West Orange, County of Essex in said State, desires to acquire the entire right, title and interest in and to the aforesaid invention and application, and in and to any Letters Patent of the United States to be granted therefor;

NOW, THEREFORE, THIS INSTRUMENT WITNESSETH that for and in consideration of one dollar, and of other good and valuable considerations, the receipt whereof is hereby acknowledged, we, said William B. Moore and Thomas H. Armstrong, have assigned, transferred and set over, unto said Edison Manufacturing Company, its successors, assigns or other legal representatives, the entire right, title and interest in the said invention, as fully set forth and described in the specification of said application for Letters Patent of the United States for said invention, and also the entire right, title and interest in and to any and all Let-



ters Patent of the United States which may be granted therefor, and in and to any reissue or reissues, or extension or extensions, of said Letters Patent, the same to be held and enjoyed by said Edison Manufacturing Company, its successors, assigns and other legal representatives, to the full end of the term or terms for which said Letters Patent of the United States are or may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us, said William B. Moore and Thomas H. Armstrong, if this assignment and sale had not been made.

And we hereby authorize and request the Commissioner or Patents to issue the said Letters Patent of the United States to said Edison Manufacturing Company, its successors, assigns or other legal representatives, in accordance with this assignment, and we hereby covenant that we have full right to convey the interest herein assigned, and that we have not executed and will not execute, any agreement in conflict herewith.

And we hereby expressly covenant and agree that whenever said Edison Manufacturing Company, its successors, assigns, or other legal representatives, advise us that other or further papers are necessary to be executed by us to perfect the title of said Edison Manufacturing Company, its successors, assigns and other legal representatives, in and to said invention, or in and to any Letters Patent of the United States therefor, and in and to any reissue or reissues, or extension or extensions, or that any reissue or reissues, or extension or extensions, is or are desirable and lawful, we will sign all papers, take all rightful oaths and do all necessary acts for procuring such reissue or reissues, or extension or extensions.

IN WITNESS WHEREOF, we have hereunto signed our  
names at Chicago, Illinois, this 12<sup>th</sup> day of October,  
1907. *William B Moore*  
*Thomas H Armstrong*

In presence of:  
*Cora A Adams*  
*Charles Burnside Brown*  
State of Illinois, }  
County of Cook. } ss:

On this 12<sup>th</sup> day of October, in  
the year of our Lord, one thousand nine hundred and seven,  
before me personally appeared WILLIAM E. MOORE, to me per-  
sonally known, and known to me to be the person described  
in and who executed the foregoing assignment, and he ac-  
knowledgeed to me that he executed the same, as and for the  
purposes therein set forth.

*(seal)*

*Cora A Adams*

State of Illinois, }  
County of Cook. } ss:

On this 12<sup>th</sup> day of October, in  
the year of our Lord, one thousand nine hundred and seven,  
before me personally appeared THOMAS H. ARMSTRONG, to me  
personally known, and known to me to be the person describ-  
ed in and who executed the foregoing assignment, and he ac-  
knowledgeed to me that he executed the same, as and for the  
purposes therein set forth.

*(seal)*

*Cora A Adams*

- A G R E E M E N T -

MEMORANDUM OF AGREEMENT entered into this 21<sup>st</sup> day of *October* 1907, by and between WILLIAM B. MOORE and THOMAS H. ARMSTRONG, both residents of Chicago, in the County of Cook and State of Illinois, parties of the first part, and the EDISON MANUFACTURING COMPANY, a corporation organized under the laws of the State of New Jersey, and having its principal place of business at West Orange, in the County of Essex in said State, party of the second part, WITNESSETH;

WHEREAS, the said William B. Moore and the said Thomas H. Armstrong have jointly invented certain new and useful improvements in MOVING PICTURE MACHINES, for which they have applied for Letters Patent of the United States, the application papers therefor having been executed by them on the 23rd day of June, 1906, and said application having been filed in the Patent Office on June 25, 1906, and numbered serially 323,270, and

WHEREAS, the said parties of the first part, for and in consideration of good and valuable considerations duly paid to them by the said party of the second part, have sold, assigned and transferred unto the said party of the second part, the entire right, title and interest in and to said invention and application and in and to any Letters Patent which may be granted thereon, and

WHEREAS, the said party of the second part has granted a license to Moore, Bond & Company, a corporation of Illinois and having its principal place of business at

Chicago, in the County of Cook in said State and now located at No. 104-6-8 Franklin Street, in the said City of Chicago, (in which corporation the said William B. Moore, one of the parties of the first part, is largely interested,) to equip moving picture projecting machines manufactured by the said Moore, Bond & Company at their factory at No. 104-6-8 Franklin Street in the said City of Chicago, and at no other place, with film protecting mechanism as set forth in the said application, and in any Letters Patent which may be issued thereon, wherefore each of the parties hereto is interested in securing the grant of a patent or patents upon the said application and in sustaining the validity of any patents to be granted on said invention;

NOW THEREFORE, in consideration of the premises and of the sum of one dollar in hand paid by each of the parties hereto to the other, it is agreed as follows:

(1) The said parties of the first part and each of them, will furnish any and all oral and written evidence, papers, exhibits, models or machines which may be required by the party of the second part and which may be material or necessary in any interference in which the said application is now involved in the Patent Office or in which it may hereafter become involved, to secure if possible and proper, a determination of the issues involved in all such interferences in favor of the said application of Moore and Armstrong, No. 323,270;

(2) The parties of the first part further agree that they will furnish all evidence, papers, exhibits, models or machines, which may be required by the party of the second part and which may be necessary or material to

sustain the validity of any Letters Patent which shall hereafter be granted upon the said application and the said invention described therein, and will perform all acts and do all things in their power proper to be performed or done, to assist the said party of the second part in maintaining the validity of such Letters Patent and in prosecuting any infringers thereof;

(3) The party of the second part agrees, if advised by counsel to do so, to prosecute all interferences in the Patent Office in which the said application of Moore and Armstrong, No. 323,270 is now or shall hereafter be involved in the Patent Office, paying all the expenses of such prosecution and further agrees, if advised by counsel to do so, to prosecute at its own expense all infringers of any Letters Patent which may hereafter be granted upon the said application;

(4) The party of the second part further agrees to reimburse the said parties of the first part and each of them, for any reasonable and proper expenses which they may incur in the furnishing of the evidence, papers, exhibits, models or machines, which the parties of the first part or either of them shall furnish in accordance with the undertakings contained in this agreement, and to pay all necessary expenses which may be incurred by the parties of the first part, or either of them, in carrying out the said undertakings, and to pay in addition to the said expense, to said parties of the first part, a reasonable sum per diem for the time actually consumed by the said parties in carrying out their said undertakings, but in every case no expenses shall be incurred nor services rendered by the parties of the first part, or either of them,

for which the party of the second part shall in any wise be liable unless the party of the second part shall be first notified thereof and signify its approval of the same.

IN WITNESS WHEREOF the parties of the first part have signed their names hereto in the presence of two witnesses and the party of the second part has caused its name to be signed by its <sup>Vice</sup> President and its corporate seal to be affixed hereto and attested by its secretary.

Witnesses to signature of  
William B. Moore.

Eva Adams  
Charles Turner Brown

Witnesses to signature of  
Thomas H. Armstrong.

Eva Adams  
Charles Turner Brown

EDISON MANUFACTURING COMPANY

By W. A. Gilmore

Vice President.

Attest.

A. Wesel

Secretary.

Corporate Seal

- L I C E N S E -

*Final Form  
as executed.*

WHEREAS, WILLIAM B. MOORE, a citizen of the United States and a resident of Chicago, in the County of Cook and State of Illinois, and THOMAS H. ARMSTRONG, a citizen of the United States and a resident of Chicago, in the County of Cook and State of Illinois, have jointly invented certain new and useful improvements in MOVING PICTURE MACHINES, for which they have applied for Letters Patent of the United States, the application papers therefor having been executed by them on the 23rd day of June, 1906 and said application having been filed in the Patent Office on June 25, 1906, and serially numbered 323,270, and

WHEREAS, said WILLIAM B. MOORE and said THOMAS H. ARMSTRONG, by an instrument in writing, properly signed, executed and delivered, have transferred and assigned the entire right, title and interest in and to the aforesaid invention and application and in and to any and all Letters Patent of the United States to be granted therefor, to the Edison Manufacturing Company, a corporation of New Jersey, and having its principal office at West Orange, County of Essex in said State, and the said Edison Manufacturing Company is now the sole owner of said invention and application and of any Letters Patent hereafter to be granted therefor, and

WHEREAS, MOORE, BOND & COMPANY, a corporation organized under the laws of the State of Illinois, and having its principal place of business at Chicago, Illinois, desires to secure a non-assignable shop-right or license to

manufacture the film protecting mechanism invented by the said Moore and Armstrong and set forth in the said application No. 323,270, and in any Letters Patent which may be granted therefor, subject to the terms and conditions hereinafter named:-

NOW THIS INDENTURE WITNESSETH, that for and in consideration of one dollar, and of other good and valuable considerations, paid by the said Moore, Bond & Company to the said Edison Manufacturing Company, the receipt whereof is hereby acknowledged, the said Edison Manufacturing Company hereby licenses and empowers said Moore, Bond & Company to manufacture, subject to the conditions hereinafter named, at its factory in the City of Chicago, and in no other place or places, film protecting mechanism containing the improvements set forth in said application, or in any patent or patents which may be issued on said application to the end of the term or terms for which said Letters Patent shall be granted;

Provided, however, that any film protecting mechanism which may be so made shall be strictly limited for use in connection with moving picture projecting machines manufactured by said Moore, Bond & Company, and in connection with Edison Universal moving picture projecting machines, which the said Moore, Bond & Company may purchase from the said Edison Manufacturing Company, and such film protecting mechanism shall not be used in any other way or in connection with any other projecting machines, nor shall such film protecting mechanism be sold or offered for sale, or leased or in any other way disposed of by the said Moore, Bond & Company, as a separate attachment for projecting machines. The Edison Manufacturing Company hereby re-



serves unto itself the right to withdraw the said Edison Universal moving picture projecting machine from the market at any time. It is understood that the factory of the licensee hereunder is now located at Nos. 104-106-108 Franklin Street, in the City of Chicago, but the Edison Manufacturing Company agrees that the shop-right herein granted will not terminate if the location of said factory be changed to any other place in the said City of Chicago, provided immediate notice of such change be given by the said Moore, Bond & Company to the said Edison Manufacturing Company. In case of any violation of the terms of this agreement by said Moore, Bond & Company this license may thereupon be revoked by the Edison Manufacturing Company.

IN WITNESS WHEREOF, the Edison Manufacturing Company has caused its name to be signed by its <sup>Vice</sup> President, and its corporate seal to be affixed hereto this 21<sup>st</sup> day of October 1907.

EDISON MANUFACTURING COMPANY

By W. B. Moore  
Vice President.

Attest.

A. W. Baker  
Secretary.

Corporate Seal

[ATTACHMENT]

- LICENSE -

*Form of license  
originally  
suggested  
but not  
finally  
made.*

WHEREAS, WILLIAM B. MOORE, a citizen of the United States and a resident of Chicago, in the County of Cook and State of Illinois, and THOMAS H. ARMSTRONG, a citizen of the United States and a resident of Chicago, in the County of Cook and State of Illinois, have jointly invented certain new and useful improvements in MOVING PICTURE MACHINES, for which they have applied for Letters Patent of the United States, the application papers therefor having been executed by them on the 23rd day of June, 1906 and said application having been filed in the Patent Office on June 25, 1906, and serially numbered 323,270, and

WHEREAS, said WILLIAM B. MOORE and said THOMAS H. ARMSTRONG, by an instrument in writing, properly signed, executed and delivered, have transferred and assigned the entire right title and interest in and to the aforesaid invention and application and in and to any and all Letters Patent of the United States to be granted therefor, to the Edison Manufacturing Company, a corporation of New Jersey, and having its principal office at West Orange, County of Essex in said State, and the said Edison Manufacturing Company is now the sole owner of said invention and application and of any Letters Patent hereafter to be granted therefor, and

WHEREAS, MOORE, BOND & COMPANY, a corporation organized under the laws of the State of Illinois, and having its principal place of business at Chicago, Illinois, desires to secure a non-assignable shop-right or license to

[ATTACHMENT]

manufacture the film protecting mechanism invented by the said Moore and Armstrong and set forth in the said application No.323,270, and in any Letters Patent which may be granted therefor, subject to the terms and conditions hereinafter named;-

NOW THIS INDENTURE WITNESSETH, that for and in consideration of one dollar, and of other good and valuable considerations, paid by the said Moore, Bond & Company to the said Edison Manufacturing Company, the receipt whereof is hereby acknowledged, the said Edison Manufacturing Company hereby licenses and empowers said Moore, Bond & Company to manufacture, subject to the conditions hereinafter named, at its factory in the City of Chicago, and in no other place or places, such factory now located at Nos.104-6-6 Franklin Street, and in the location thereof be changed immediate notice of such change is to be given to the said Edison Manufacturing Company by said Moore, Bond & Company, film protecting mechanisms containing the improvements set forth in Moore and Armstrong's said application, serially numbered 323,270, or in any patent or patents which may be issued on said application to the end of the term or terms for which said Letters Patent shall be granted;

This license grants no right to manufacture any part or parts of moving picture projecting machines, under any patents which are or may be controlled by the Edison Manufacturing Company, except the film protecting mechanism therefor embodying said invention of Moore and Armstrong, and is limited strictly to the equipping of moving picture projecting machines manufactured by the said Moore, Bond & Company with the said film protecting mechanism, and the said Moore, Bond & Company does not, under this license, acquire the right to equip machines other than those manufactured by it with the said improvements, nor to make or sell, or lease or otherwise dispose of, automatic film pro-

[ATTACHMENT]

protecting mechanism, as attachments for moving picture projecting machines other than those manufactured by said Moore, Bond & Company, nor to sell, lease or otherwise dispose of such film protecting mechanism independently of moving picture projecting machines. In case of any violation of any of the terms of this license by said Moore, Bond & Company, this license may thereupon be revoked by the Edison Manufacturing Company.

IN WITNESS WHEREOF, the Edison Manufacturing Company has caused its name to be signed by its President, and its corporate seal to be affixed hereto this                      day of

1907

EDISON MANUFACTURING COMPANY

By \_\_\_\_\_

President.

Attest

\_\_\_\_\_  
Secretary.

Oct. 21, 1907

A. Wastes, Secretary  
Edison Manufacturing Company,  
Orange, N. J.

Dear Sir:--

Please let me have a check of the Edison Manufacturing Company, for seven hundred dollars (\$700.) drawn to the order of William B. Moore and Thomas H. Armstrong. This is to pay for the invention and application of the said Moore and Armstrong for film protecting shutter for moving picture machines, the purchase of which has been authorized by Mr. Gilmore. All the papers are now ready, and immediately on receipt of this check we will close the transaction.

Very truly yours,

RHD/MJL

General Counsel.

Check No 19484

Oct. 22, 1907

Charles Turner Brown, Esq.,  
Unity Building, Chicago, Ill.

Dear Sir:--

I am enclosing you the following:

Edison Manufacturing Company's check for seven hundred dollars (\$700.) drawn to the order of William B. Moore and Thomas H. Armstrong.

License made by the Edison Manufacturing Company to Moore, Bond & Company.

Agreement between the Edison Manufacturing Company and Moore and Armstrong, executed on the part of the Edison Manufacturing Company.

Substitute Power of Attorney in Moore and Armstrong application.

Extra copies of the above agreement and of the assignment made by Moore and Armstrong to the Edison Manufacturing Company.

Please sign the substitute Power of Attorney and return same to me. All the other papers are to be retained by you.

CTB--2--Oct.22, 1907.

I trust that this satisfactorily closes up the matter of the purchase of the Moore and Armstrong application by the Edison Manufacturing Company.

Very truly yours,

General Counsel.

HMD/KJL

enclosures.

PATENT, TRADE-MARK  
AND COPYRIGHT CAUSES  
A SPECIALTY.

Telephone, Market 1246.  
Automatic 264.

CHARLES TURNER BROWN,  
ATTORNEY AT LAW  
888-890 UNITY BUILDING,  
79 Dearborn Street

UNITED STATES AND  
FOREIGN PATENTS  
OBTAINED.

CHICAGO, ILL., Oct. 24, 1907.

Frank L. Dyer, Esq.

Orange, N. J.

Dear Sir;

I enclose substitute attorney appointment, as per your request this day received. Draft and executed instrument license Edison Mfg Co. to Moore-Bond & Co, with copies of ~~license~~, assignment and agreement also received, for which please receive my thanks.

I telegraphed you yesterday "Send draft payment Moore-Armstrong assignment Edison Mfg Co." because the party East who desired to negotiate for purchase again wrote Messrs M. and A., and they suggested they did not want to send final refusal until I heard of the receipt by you of the signed papers, and that same were satisfactory; and I, believing they must be, worded the telegram.

I am pleased the matter is disposed of; and will be of such assistance to you as I can, at your request.

Yours truly,

*Charles Turner Brown.*



BAXTER MORTON  
COUNSELOR AT LAW

~~66 BROADWAY~~  
NEW YORK

117 Nassau St

October 26th, 1907.

Mr. H. H. Dyke,  
Legal Department, Edison Laboratory,  
Orange, N. J.

Dear Mr. Dyke:-

I have gotten together all the witnesses on behalf of Power in the interference Power vs. Aiken vs. Certly except one, and can put in Power's testimony in chief this week if you are anxious to go ahead with the interference. If you have no special desire to proceed, I shall be very glad to stipulate a postponement of the testimony. If you would prefer to go ahead, I would like to begin at 11 a.m. Thursday, October 31st. Unless I can secure a suitable room nearer the office of the Nicholas Power Company for the purpose, I will expect to take the testimony at my former office at 42 Broadway.

Please let me know at once what you would prefer to do in the premises. Perhaps you had better telephone me as soon as you have considered the matter with Mr. Dyer. I will be at the office of the Nicholas Power Company all of Monday morning, and probably, Monday afternoon after 2 o'clock. The phone number ~~66~~ 7653 Cortlandt.

From my observation of conditions in the picture machine business, I am disposed to think it would be a good thing for all if the principal manufacturers of picture machines were to effect some working arrangement so as to present a strong front to the trade, and insure a continuance of substantial profits. I have reason to believe that practically all the manufacturers outside of the Edison Company would look favorably upon an arrangement of this character, and that they would be willing to join in any equitable arrangement. I am mentioning this because I presume you know or can easily find out how the Edison Company would look upon a proposition to enter into such an arrangement. If you are in a position to do so, I wish you would let me know how such a proposition would probably be received, and, if you think any arrangement including the Edison Company could be made, I would like to know whom it would be well to take the matter up with. If anything could be accomplished by coming out to your office and taking the matter up with Mr. Dyer and other gentlemen connected with the Edison Company, I will be glad to come out at once and present my views of the matter.

Yours very truly,

Baxter Morton

BAXTER MORTON  
COUNSELLOR AT LAW  
OF NEWARK  
NEW YORK  
115 Nassau Street.

Oct. 29, 1907.

Mr. H. H. Dyke,  
Assistant Counsel,  
Edison Laboratory,  
Orange, N. J.

Dear Mr. Dyke:-

Your favor of yesterday confirming telephone conversation received and in reply beg to say that I shall probably run out to Orange on Friday to confer with you and such other gentlemen as you may think it advisable to see, but will communicate with you by telephone Thursday evening or Friday morning to make a definite appointment.

I am enclosing stipulation for an extension of time in the two interferences, and would say relative to the interference involved in the application of my client, Schneider, that he does not care to contest this interference, as he is no longer putting out an automatic shutter which is mounted on the door of his mechanism. He has left disposition in the interference entirely in my hands, and I am willing to get from him a formal concession of *priority* of invention of the issue now defined in the interference, if you can secure from your clients an agreement not to interfere with users of apparatus which he has fitted with automatic shutters mounted on the door. If this is agreeable to you, kindly let me know and I will have drafted the necessary instrument for Schneider's execution and have it executed without delay.

Yours very truly,

*Baxter Morton*

*as to Schneider's concession &c  
Above proposition, accepted & by letter  
of Nov 12, 1907. in correspondence file in  
Ames Box*

Nov. 4, 1907

Messrs. Bacon & Milans,

208 G Street, Washington, D. C.

Gentlemen:--

I telegraphed you this morning :

"Don't file Alken concession of priority.  
Assignee is wrong."

I am enclosing you a properly drawn concession  
of priority, the assignee being the Edison Manufacturing  
Company and not the New Jersey Patent Company, as stated  
in the paper which I first sent you. Please have this  
paper filed in the Patent Office without delay and oblige

Yours very truly,

RHD/MTJ  
enclosure

General Counsel.

BAXTER MORTON  
COUNSELOR AT LAW  
~~RECEIVED~~  
NEW YORK  
117 NASSAU ST.

Nov. 7, 1907.

Mr. H. H. Dyke, Asst. Counsel,  
Edison Laboratory,  
Orange, N/ J.

Dear Mr. Dyke:

Your letter covering signed copy of the agreement with Schneider duly received and contents noted. I will accordingly have Schneider execute a formal concession of priority and send it to you as soon as possible.

In the Power interference, I should like to take testimony as soon as you can attend. I shall have to go to Chicago to attend the Moving Picture Convention on Saturday next and am hoping we can close the testimony by Thursday afternoon. I shall call only five witnesses and none of the depositions should be very long. I will call you up Monday at 10 A. M. to arrange finally about it.

Yours very truly,

*Baxter Morton*

Legal Box 173

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In the  
United States Patent Office

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OERTLY

vs.

AIKEN

vs.

POWER.

*Interference No. 27,479 D.  
Automatic Film Protecting Screen  
For Kinetoscopes.*

---

BRIEF FOR OERTLY ON FINAL HEARING.

---

FRANK L. DYER,

*Attorney for Oertly.*

HERBERT H. DYKE,

*Of Counsel.*

## In the United States Patent Offices

OERTLY,  
vs.  
AIKEN,  
vs.  
POWER.

Interference No. 27,479 D.  
Automatic Film Protecting Screen  
For Kinetoscopes.

### BRIEF FOR OERTLY ON FINAL HEARING.

Oertly is the senior party to this interference, having filed his application in April, 1906, the application of Power not having been filed until the following October. Oertly being the senior party and the first to apply to the Patent Office is *prima facie* the first inventor, and the burden of proof is on Power to establish clearly and affirmatively that he is the prior inventor. *Funk vs. Matzeon vs. Haines*, 100 O. G., 1764; *Robinson vs. Thresher*, 123 O. G., 2637.

Oertly has taken no proofs but relies on his date of filing, April 24, 1906, for a constructive reduction to practice. The testimony in behalf of Power is to the effect that he constructed an attachment for a moving picture projecting machine, embodying the invention of the interference issue in August and September, of 1905, that this machine, which is in evidence as "Power's Exhibit A," was subjected to some shop tests, the outcome of which is not shown by the evidence, reliance being apparently placed by Power upon the test of the device in Herald Square, New York, in front of the Herald Building, in the month of November, 1905, on the night when the returns were made of the McClellan and Hearst election; that the machine was placed on the shelf from the time of its completion until election night, 1905, at which time it was used for the projection of moving pictures in Herald Square, and that since that time it has remained on the shelf until it was taken down for use in connection with the preparation of the patent application in-

volved in this interference, about October, 1906—and it is to be noted in this connection that the machine on which application for patent was made is quite different from the machine made in August and September of 1905; and in evidence as "Power's Exhibit A"—and that from that time until it was introduced in evidence in this interference in the month of December, 1907, it was again placed on the shelf and no use was made of it.

It will be apparent that to prevail in this proceeding Power must show that the machine in evidence as "Power's Exhibit A" is a reduction to practice of the invention of the interference issue, for it is quite apparent that except for what was done in the making and use of this machine, Power was not diligent in following up his conception of August, 1905 (see preliminary statement); for he did not file his application until October, 1906. The law on this point is well stated in *Paul vs. Hess*, 115 O. G., 251 (Court of App., D. C.), as follows:

"That application having been filed later, the burden was imposed upon Paul, to show a reduction to practice preceding Hess' date, or of such an earlier conception followed up with due diligence to reduction to practice, either actual or constructive."

Power alleges, as reasons for his delay, that he was extremely busy, and that there was no demand for a film-protecting screen until about the time of the filing of his application, but it is well settled that Oerly having entered the field during the period of his inactivity, these mere business reasons will not excuse Power's delay of a year and more in the filing of his application. *Watson vs. Thomas*, 106 O. G., 1776, C. D. of 1903, page 370; *Robinson vs. Copeland*, 111 O. G., 579, C. D. of 1904, page 257; *Seeborgers vs. Dodge*, 114 O. G., 2382; *Wyman vs. Donnelly*, C. D. of 1903, page 556, and *Perkes vs. Lewis*, 123 O. G., 2313.

#### TESTS GIVEN TO POWER'S MACHINE OF 1905.

There are several indefinite references in the evidence on behalf of Power to tests given to the shutter attachment to see whether it worked properly, as for example, in the evidence of Power himself we find the following:

"Q. 29. Was the exhibition which was given by you with the apparatus in evidence on election night, 1905, given for the purpose of testing the shutter attachment on it?

A. I tested it previous to that under way satisfactory to me."

This testimony, of course, refers to tests made during the construction of the shutter attachment and not after its completion. In the testimony of the witness Uhlermann (Q. 15), there is a statement that the attachment was operated in the shop at 117 Nassau Street, but nothing is said as to the outcome of such tests. Such somewhat indefinite suggestions furnish no clear indication of whether or not the machine was operative at the time of its construction, and it is apparent that if this machine is held to have been a reduction to practice in 1905, such holding must be based upon the tests which were made on election night, in November, 1905. It is, of course, well settled that the fact that the machine may now appear to be operative in that when the crank is turned the shutter will be raised, does not prove that it was operative at the time when it is alleged to have been made. *Fefel vs. Stocker*, 94 O. G., 433, C. D. of 1901, p. 265. Further, such operation is of no value as it is not a test under working conditions, for the machine is designed to operate in the presence of a high heat and when a film is being passed through it for purposes of exhibition.

In *Bliss vs. McIlroy*, 122 O. G., 2687 (affirmed by Court of Appeals, D. C., 128 O. G., 458), where the device in issue was intended for the electrical lighting of railway cars, the Commissioner said:

"This device was never used for the purpose of lighting a car, but for the purpose of experiment was tested in the basement of a building. It seems to have been laid aside after the test and Bliss devoted his attention to other inventions. He made and put into use another car-lighting system and filed many applications relating to other inventions. Such conduct naturally tends to discredit his allegations that his test of this invention was a success."

Power's device, like that of Bliss, was discarded after its completion and alleged test and was replaced by another and different device.

Coming now to a consideration of the evidence as to the use of this machine for projecting motion pictures on the night of the November, 1905, election, Power's own opinion of the machine may be inferred from the fact that he states that he used it because he had no other machine head available at the time (Q. 21). In his testimony he states merely that he used this machine on that occasion for projecting pictures and he says nothing as to how the shutter attachment operated. His daughter, Miss Lillian Power, was present at Herald Square, and was in a position where she could have discerned the operation of the shutter, but she only glanced at the machine occasionally and devoted the major part of her attention to the exhibition of the picture on the screen (x-Q. 16). The witness Smith, who was present, was very much impressed with the excellent character of the picture which was thrown on the screen, but says nothing about the operation of the film protecting shutter, and finally, the witness Steiner says that he was in the booth during the exhibition, but he makes no statement as to the operation of the shutter of this issue in that connection.

This testimony proves very clearly that the machine then in use successfully projected a moving picture upon a screen, but there is not a word in it about the operation of the attachment here in issue, which is entirely independent of the sort of a picture thrown upon the screen and which might have operated admirably during the projection of the poorest sort of a moving picture. That a good picture was thrown upon the screen proves absolutely nothing about the protecting shutter of the issue which comes into play only when the crank of the projecting machine is not in motion, and acts to shut off the light and heat of the projection lamp from the film. There is no evidence of any stoppages of the machine during the moving picture exhibition, and nothing whatever is said as to the operation of this shutter. Certainly, the evidence of a successful test of the shutter attachment of the interference issue on that occasion has not been proven in any such clear and sufficient manner as would justify a holding that it had been successfully reduced to practice. The kind of evidence demanded in a case like the present is clearly set forth in *Robinson vs. Thresher*, supra, as follows:

"Where the award of priority depends upon the sufficiency of the proofs of successful reduction to practice by one of the parties, held that the witnesses who testify to the success of tests and operations of machines should give clear, full, and specific statements as to all essential facts, and that in a case of this kind it is not sufficient for the witnesses to state that a machine was tested and found satisfactory."

The mere fact that a machine was tested or used is not enough, the result of such test must be shown:

*Macdonald v. Edison*, 105 O. G. 673.  
*Rolfe v. Hoffman*, 118 O. G. 833.  
*Bauer v. Crane*, 118 O. G. 1,071.

The further actions of Power in connection with this machine go far to indicate that the invention was not reduced to practice by the machine "Exhibit A," and that that machine was a mere abandoned experiment, for after its use on this occasion he discarded it and put it back on the shelf whence he removed it only when forced to do so because he had no other machine for use and when, in the month of October, 1906, he determined to apply for a patent upon a film protecting mechanism of this general description, he says that this machine was taken from the shelf during the preparation of his patent application, but, as a matter of fact, the machine on which he applied for a patent was one totally different therefrom. He attempts to explain the fact that he applied for a patent on a different machine from "Exhibit A," by saying that the machine to which he fitted the later shutter attachment had the crank shaft nearer the top and that he changed the mechanism for operating the shutter to suit the position of the crank shaft (Q. 37), but it will be apparent from the comparison of the device of the patent application and the machine in evidence that the difference between the two are much greater than those which can be accounted for by the mere fact that the crank shaft is higher in the one than in the other. The shutter and its operating means have been re-designed throughout in the machine on which patent has been applied for and it is evident that many changes in the later machine



were resorted to because as Power's earlier device was a mere unsuccessful experiment, which he abandoned in favor of his later form of construction.

#### CONCLUSION.

We submit in conclusion that Power, who is the junior party, has not sustained the burden which rests upon him to show by clear and affirmative proof that his 1905 machine was a reduction to practice of the invention and is therefore entitled to the date thereof—November, 1905—only as a date of conception; that he did nothing with his invention from November, 1905, until September, 1906, and that during this period of his inactivity, Oertly in April, 1906, entered the field and constructively reduced the invention to practice by the filing of an allowable application and that, therefore, Oertly, although the last to conceive, was the first to file and the first to reduce to practice, and is entitled to an award of priority.

Respectfully submitted,

FRANK L. DYER,

*Attorney for Oertly.*

HERBERT H. DYKE,  
*Of Counsel.*

sent 6/16/08  
John Oertle Camfield  
To Hobbs, Feltknecht & Co.  
Cincinnati Ohio

Did you show your  
automatic film protecting  
shutter to Nicholas  
Power while East in  
spring 1906. We are under  
my expense  
Frank L. Hays

*cert. letter from N.Y.*

**POSTAL TELEGRAPH**



**COMMERCIAL CABLES**

Date *June 16*

To *Mr. Lufkin*

From *you*

Subject *to am*

CLARENCE H. MACKAY, PRESIDENT

**TELEGRAM**

REGISTERED TRADE-MARK, DESIGN PATENT NO. 2888.  
The Postal Telegraph Cable Company (Incorporated) transmits and delivers this message subject to the terms and conditions printed on the back of this blank.

*31 N.Y. Jun 19 Collect Received at 54070  
Cincinnati Ohio 16 64  
Frank L. Oyer June 16-1908  
Care Edison Phonograph Works  
Orange*

*Never saw nicholas power - Device  
was expressed to Walter and I only  
saw it afterward in your presence  
John Kelly -*

BAXTER MORTON  
COUNSELOR AT LAW  
PATENTS AND PATENT CAUSES  
41 PARK ROW  
NEW YORK

August 5th, 1906.

F.L. Dyer, Esq.,  
General Counsel,  
Edison Mfg. Co.,  
Orange, N.J.

My dear Mr. Dyer:-

I have before me a letter from Mr. Dyke, dated August 4th, relative to the patent situation, and beg to say that the exchange of licenses outlined in his letter is entirely satisfactory to me. I suppose the actual drawing of the licenses may as well go over until Mr. Dyke's return.

Yours very truly,

*Baxter Morton*

L

*Morton says over telephone  
need not draw up until  
Moore and Armstrong patent  
issues  
Dyke*

Arken  
April 10  
concerned

no disclosure to other  
model is May - reduction to practice, date, any  
drawing in game from the machine

made about 300 ~~clot~~ 11 + 30 + 33

ask film dep

how many his prof. machine made

shutted on

20

Aiken —

May 31

Thorp order May 21 for Betty model. Didn't make  
it but made Aiken's device - Tried it  
between then & May 27 - Took four or  
five days to make it - McKenney has  
note book and dates when he  
worked on it - special endoscope  
part.

Arken Derty Interference

Arken claim 31 is to a specifically  
different form from other claims as, for  
example, claim 5 and claim 14.

Arken must prepare 4 pat. sts 10, 30, 37, 38  
Derty " " 3 " (17, 18, 19, 20)

If there 2 will be on identical claims 32 & 05. 21  
" 33 " 20

Derty interference to on claims 17+18 will  
likely be dissolved, see claims suggested.

May British 10 047 May 1888-16 791  
Cddg of L Guernsey & Co 55 Local Court  
Charity Cross Road London 402

Boris 823 913

Palmer 826 524

(French) 326 568



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2	Alder				main main of	main H main of		
1	Alder				main main of	main H main of		

**LEGAL DEPARTMENT RECORDS  
MOTION PICTURES - CASE FILES**

This material consists of correspondence, court documents, and other items relating to infringement suits, antitrust suits, and copyright actions involving motion pictures. Most of the selected items cover the years 1902-1910, but some case files are from the 1910s. Several cases relate to alleged copyright infringements. Others deal with suits brought by the Motion Picture Patents Co. against unlicensed manufacturers for infringement of Woodville Latham's U.S. Patent 707,934. Also included are several suits brought against the Motion Picture Patents Co., the General Film Co., and their licensed manufacturers by independent motion picture exhibitors and by the federal government. Closely related cases have been grouped in the same folder.

***American Mutoscope & Biograph Company v. Edison Manufacturing Company***

This folder contains material pertaining to a suit brought by the American Mutoscope & Biograph Co. against the Edison Manufacturing Co. in the U.S. Circuit Court for the District of New Jersey. The case was initiated in November 1904 and involved the alleged infringement of Biograph's copyright for the film, *Personal*. The selected items include the bill of complaint and affidavits by the complainant and defendant.

***Armat Moving Picture Company v. Edison Manufacturing Company***

This folder contains material pertaining to the suit brought by the Armat Motion Picture Co. against the Edison Manufacturing Co. in the U.S. Circuit Court for the Southern District of New York. The case was initiated in 1902 and later heard in the U.S. Circuit Court of Appeals. It involved the alleged infringement of U.S. Patent 586,953 issued to Thomas Armat and C. Francis Jenkins. The selected items include affidavits by Edison, William Heise, John F. Ott, and others for the defense, along with correspondence between attorneys on both sides of the case regarding possible settlements and cross-licensing agreements.

***Thomas A. Edison v. Sigmund Lubin***

This folder contains material pertaining to the suit brought by Edison against Sigmund Lubin in the U.S. Circuit Court for the Eastern District of Pennsylvania. The case was initiated in June 1902 and involved the alleged infringement of Edison's copyright on the film, *Christening and Launching Kaiser Wilhelm's Yacht Meteor*. The selected items include the bill of complaint and brief for complainant, along with correspondence regarding the case and its subsequent appeal to the U.S. Circuit Court of Appeals and then to the U.S. Supreme Court. Also selected is the decision of the appellate court, which reversed the decision of the lower court and established that motion pictures could be protected in the same way as still photographs under the Copyright Act of 1885.

***Greater New York Film Rental Company v. Motion Picture Patents Company et al.***

***Greater New York Film Rental Company v. General Film Company et al.***

This folder contains material pertaining to suits brought by the Greater New York Film Rental Co. against the Motion Picture Patents Co. (MPPCo) and the General Film Co. in the State of New York and in the federal courts. Other defendants included Thomas A. Edison, Inc., the Edison Manufacturing Co., the American Mutoscope & Biograph Co., and other manufacturers licensed by MPPCo. The cases were initiated in 1911 and 1914 and involved disputes over licenses and allegations of monopoly against MPPCo and the General Film Co. The selected items are primarily from a printed record in the state case: *Summons, Complaint, Affidavits, Injunction and Order to Show Cause*. Several pages bear marginal notations by Edison. Also included are a few letters regarding the eventual settlement of the federal suit by decree in 1916.

***Motion Picture Patents Company v. Independent Moving Picture Company of America***

This folder contains material pertaining to the suit brought by the Motion Picture Patents Co. against the Independent Moving Picture Co. in the U.S. Circuit Court for the Southern District of New York. The case was initiated in February 1910 and involved the alleged infringement of Woodville Latham's U.S. Patent 707,934. The selected items are from the complainant's record and consist of the index, bill of complaint, and testimony of William K. L. Dickson.

***Motion Picture Patents Company v. Universal Film Manufacturing Company et al.***

***Jesse Isidor Straus et al. v. Victor Talking Machine Company***

This folder contains two U.S. Supreme Court opinions of April 9, 1917. The first pertains to the suit brought by the Motion Picture Patents Co. against the Universal Film Manufacturing Co. and other defendants for infringement of Woodville Latham's U.S. Patent 707,934. The second relates to the suit brought by Jesse Isidor Straus and other plaintiffs against the Victor Talking Machine Co. Both opinions became legal precedents, barring the license agreements used by the Motion Picture Patents Co. and Thomas A. Edison, Inc., to fix prices and otherwise limit the use or sale of their products. Both opinions contain marginal notations, some probably by Edison.

***Richard F. Outcault v. Edison Manufacturing Company and Percival L. Waters***

This folder contains material pertaining to the suit brought by cartoonist Richard F. Outcault against the Edison Manufacturing Co. and Percival Waters of the Kinetograph Co. in the U.S. Circuit Court for the Southern District of New York. The case was initiated in April 1904 and involved the alleged infringement of Outcault's copyright for his Buster Brown cartoon. The selected items include an Outcault cartoon and a description of a motion picture based on the cartoon, along with the bill of complaint and affidavits by Waters and Edwin S. Porter.

***Triple Damage Suits***

This folder contains material pertaining to damage suits brought against the Motion Picture Patents Co., Thomas A. Edison, Inc., and other licensed manufacturers by the Chicago Film Exchange, the Theatre Film Service of San Francisco, and other licensed and unlicensed exhibitors. Most of the cases were initiated in April and May 1915, after the federal government's antitrust case against the Motion Picture Patents Co. was settled by decree in February. The plaintiffs sought triple damages from the defendants under the provisions of the Clayton Antitrust Act of 1914. The selected items include correspondence by Edison and by Delos Holden and Henry Lanahan of the Legal Department concerning the defense and the eventual settlement of the suits.

***United States of America v. Motion Picture Patents Company et al.***

This folder contains material pertaining to an antitrust suit brought by the federal government against the Motion Picture Patents Co. The case was initiated in 1912 in the U.S. District Court for the Eastern District of Pennsylvania. It was subsequently appealed to the U.S. Supreme Court. The selected items include the government's original petition; testimony by Frank L. Dyer at hearings held in New York City in November 1913; and memoranda from 1915 briefing Edison on the progress and settlement of the suit.

***James H. White and John R. Schermerhorn v. Percival L. Waters***

This folder contains material pertaining to the suit brought by two Edison Manufacturing Co. employees, James H. White and John R. Schermerhorn, against Percival Waters of the Kinetograph Co. The case was initiated in the New York Supreme Court for the County of New York in January 1909 and involved kickbacks and conflicts of interest. The selected items include the judicial finding from June 1910 against the plaintiffs, along with affidavits subsequently collected by the plaintiffs in order to reopen the case and clear their names. The affidavits are by Alexander T. Moore, the two plaintiffs, and their attorney, Selden Bacon.

**Legal Department Records  
Motion Pictures - Case Files**

***American Mutoscope & Biograph Company v.  
Edison Manufacturing Company***

This folder contains material pertaining to a suit brought by the American Mutoscope & Biograph Co. against the Edison Manufacturing Co. in the U.S. Circuit Court for the District of New Jersey. The case was initiated in November 1904 and involved the alleged infringement of Biograph's copyright for the film, *Personal*. The selected items include the bill of complaint and affidavits by the complainant and defendant.

Eligible Legal Box 173

12/17/04

United States Circuit Court,

DISTRICT OF NEW JERSEY.

AMERICAN MUTOSCOPE AND BIOGRAPH COMPANY, <i>Complainant,</i>	} In Equity.
vs.	
EDISON MANUFACTURING COMPANY, <i>Defendant.</i>	No.

COMPLAINANT'S MOTION PAPERS AND  
REBUTTING AFFIDAVITS.

KERR, PAGE & COOPER,  
*Counsel for Complainant.*

C. G. BUNNOWN, Walker and Centre Streets, N. Y.

1

**United States Circuit Court,**

DISTRICT OF NEW JERSEY.

2

AMERICAN MICROSCOPE & BIOGRAPH  
Co.,  
Complainant,

vs.

EDISON MANUFACTURING COMPANY,  
Defendant.

In Equity,  
No.

3

**Rule to show cause why an injunction  
pendente lite shall not be issued against  
defendant.**

4

Upon reading and filing the bill of complaint herein and upon the annexed affidavits of Frank J. Marion, Harry N. Marvin and Ervry W. Cooper, and the exhibits therein referred to, let the defendant or its counsel show cause before me, at a session of this Court to be held in the Court Room thereof in the U. S. Court and Post Office Building, in the City of Trenton, in the District of New Jersey, on the 19th\* day of December, 1904, at the opening of Court on that day, or as soon thereafter as counsel can be heard, why an injunction *pendente lite* shall not be issued against the

\* (The hearing was postponed until December 19, 1904.)

5 said defendant in accordance with the prayer of the bill.

And let the defendant, or its counsel, serve copies of any papers it or they may have to submit upon the return of this order to show cause, upon complainant's solicitors on or before Friday, December 5, 1904.

And let service of a copy of this order and of the accompanying affidavits upon the defendant at Orange, N. J. on or before the 18th day of November, 1904, be deemed sufficient service.

6 Dated, Trenton, N. J., Nov. 12, 1904.

WM. M. LANNING,  
U. S. Judge.

### Bill of Complaint.

7 TO THE HONORABLE THE JUDGES OF THE UNITED STATES  
CIRCUIT COURT FOR THE DISTRICT OF NEW  
JERSEY.

American Motoscope & Biograph Company, a corporation organized and existing under the laws of the State of New Jersey and having its principal place of business in the City, County and State of New York, brings this its bill of complaint against Edison Manufacturing Company, a corporation organized under the laws of the State of New Jersey, and a resident of the said State, and having its principal place of business in the Township of West Orange, in the County of Essex in the said State.

8 And thereupon your orator complains and says as follows:

I. That your orator is now engaged in the business of making, exhibiting and selling photographs representing objects in actual motion, and that your orator, under its present name, or the name under which it

was originally incorporated, to wit, American Motoscope Company, has been engaged in the said business for upwards of eight years last past.

II. That on or about the 15th day of June, 1904, your orator became the sole proprietor of a certain photograph, entitled "Personal", which said photograph was made at your orator's direction and expense within the United States by a photographer in the employ of your orator upon a certain negative film, which said film was subsequently developed and the photograph taken thereon printed on certain positive films; and that your orator thus became the exclusive owner and proprietor of the said photograph on or about the 15th day of June, 1904, and before the same had been published.

III. That on or about the 28th day of June, 1904, your orator duly made application to the Librarian of Congress for the registration of a copyright on the said photograph entitled "Personal", and such proceedings were duly had by your orator that on or about the 29th day of June, 1904, your orator did secure a copyright of the said photograph, pursuant to the Act of Congress for securing copyrights which took effect on the 8th day of July, 1870, and the amendments thereto; that the said copyright was duly issued to your orator under the hand and seal of the Librarian of Congress, and the original record of said copyright is now in the Library of Congress.

IV. That the following is a true copy of the said proceedings for the entry of the said copyright:

"LIBRARY OF CONGRESS, WASHINGTON, D. C.  
Copyright Office.

"DEAN SHERBURN—Copyright entry has been duly made under date of Jan. 28, 1904, in accordance with your application of June 28, /04, for 1 title Personal.

"Upon receiving this notice your article can be produced with the statutory notice of copyright.



Bill of Complaint.

13 "Should a certificate of copyright be desired, please remit for each entry the legal fee of 50 cents.  
 "The law requires that two copies of the best edition of each article copyrighted shall be sent to the Library of Congress. If you have not already done so, when your work is printed or otherwise produced, send two copies addressed: The Librarian of Congress, Copyright Office, Washington, D. C., in compliance with the law.

14 "Respectfully,  
 THORVALD SOLBERG,  
 Register of Copyrights.  
 THE AMERICAN MICROSCOPE & BIOSCOPE CO.,  
 11 East 14th Street, New York, N. Y."

And your orator has annexed to this bill of complaint, and makes a part hereof, a certificate of copyright of the said photograph which is marked "Compliment's Exhibit Copyright Certificate"; and your orator begs leave to submit the said original record of copyright, together with the said certificate, a part of this bill of complaint, and to be allowed to refer to the said original record.

15 V. That two copies of the best edition of the said photograph were sent by your orator to the Librarian of Congress on the 28th day of June, 1904, and were, as your orator is informed and believes, received and filed by the Librarian of Congress at Washington, D. C. on or before the 29th day of June, 1904, and before the publication of the said photograph; and that the said two copies were made from a negative which was made within the United States.

16 VI. That your orator gave due notice of the said copyright by attaching said notice to every copy of the said photograph which your orator had published, exhibited or sold, to wit, by inscribing, impressing or printing upon some visible portion of every said copy, or upon some visible portion of the substance on

Bill of Complaint.

17 which the same was mounted or printed, the following words:

"Copyrighted 1904 by American Microscope & Biograph Co."

VII. That your orator is, and ever since the said 29th day of June, 1904, has been, the proprietor of the said photograph, and has exhibited, published, sold and used the same with the said notice of said copyright attached, printed or impressed on each photograph so published and sold by your orator.

VIII. That the said photograph was taken by means of a camera owned by your orator whereby successive views of the same object are taken from the same point of view, so that when the said views are successively thrown upon a screen by means of a projecting apparatus similar to a magic lantern, or otherwise caused to appear in rapid succession within the range of vision of the observer, the impression of actual motion is thereby given; and that the said successive views were taken on one negative consisting of a strip of film of about 270 feet long, and that from said negative film positive films of somewhat varying lengths have been made by your orator in the course of its regular business and sold or rented for the purpose of having them reproduced as above described to give the effect to the observer of actual motion, and that such view is not sold or rented by itself, but that the views are sold in numbers together, being printed on one strip of film for the said purpose and constituting one photograph.

18 19 20 IX. That the scene prominently depicted in said photograph occurred largely at Grant's Tomb on Riverside Drive in New York City and represents a French gentleman who, having inserted an advertisement stating his desire to meet a handsome girl at Grant's Tomb at a certain time with the ultimate object of matrimony, appears at Grant's Tomb and is beset first by one woman, soon by another, thereby

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several in succession who are so important in their attentions that he is forced to flee, and does run away from them with the women in close pursuit. In successive scenes the chase is depicted across the country in various situations until at last the Frenchman is overtaken by one of the pursuers who discovers him in hiding and, at the point of a pistol, compels him to yield; that in order to produce the effect above described it was necessary for your orator to employ skilled artists to prepare the apparatus for taking the photographs, and for the manipulation of such apparatus skilled pantomimists were drilled for the performance of the action portrayed who were rehearsed in their parts; that the manipulation of the camera and film, the editing of the film, the reconstruction of the same in such a manner as to produce most perfectly the illusion sought to be made required high skill and involved much expense; that the positive films printed from the negatives so produced when thrown upon a screen by means of an appliance similar to a magic lantern gives to the observer an amusing and enterprising picture of the scene described above.

22  
23  
24  
X. That by reason of the amusing and entertaining character of the scene produced as above described, the said photograph is well known to, and much valued by, the public, and your orator has derived a large income by exhibiting the said photograph as aforesaid at the theatres and places of amusement, and by selling the same for the purpose of exhibiting, so that your orator has exhibited and sold to the public large numbers of said films, which are called in the trade "positive films," and has derived, and is still deriving, large profits therefrom, and expects to continue hereafter to derive large profits therefrom.

XI. That until the commencement of the infringement next hereinafter set forth your orator was in the exclusive quiet use, enjoyment and profit of the said

copyright, and its rights thereto had been acquiesced in by the public.

XII. Notwithstanding such quiet use, enjoyment and profits to your orator of the said photograph, and the copyright protecting and reserving the same, and all rights thereunder, to your orator, the defendant Edison Manufacturing Company, well knowing the premises and knowing of your orator's copyright, and willfully disregarding your orator's rights in the premises, did, subsequent to the 29th day of June, 1904, and prior to the commencement of this suit, without your orator's consent and against your orator's wishes, wrongfully and fraudulently prepare, publish and print for sale, and did sell at its place of business at said West Orange, in the County of Essex and State of New Jersey, and elsewhere within the United States, copies of said photograph copyrighted as set forth by your orator, under the title of "How a French Nobleman Got a Wife Through the New York Herald 'Personal' Columns", or other title or titles of like meaning, and threatens to continue such sale and publication of the said copyrighted photograph, all of which acts were, and still are, being done by the said Edison Manufacturing Company with intent to deceive and defraud the public and the buyers and users of the said photograph, and to deprive your orator of its just rights and profits under the said copyright; and the said defendant has published and sold, and is still publishing and offering for sale, the said photograph entitled "How a French Nobleman Got a Wife Through the New York Herald 'Personal' Columns", or a like title, which is a substantial copy of and identical with your orator's said copyrighted photograph, and said defendant threatens and intends to continue such publication and sale.

XIII. That by such publication and sale of said photograph entitled "How a French Nobleman Got a Wife through the New York Herald 'Personal' Columns",

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the defendant has imitated the said photograph protected by copyright to your orator, and that such sale of the same is calculated to deceive and defraud the public, naturally has and still does mislead the public, because the copies thereof so sold by the defendant contain the same views and produce the same effects as the said photograph owned and copyrighted by your orator, greatly to the diminution of your orator's said business and profits.

30

XIV. That by reason of the premises and the wrongful acts of the defendant aforesaid your orator has been injured to the amount of three thousand dollars (\$3,000), and is still being injured by the continued publication and sale by the defendant of the said photograph, although the defendant was duly notified by your orator and was well aware a long time prior to the commencement of this action that the said photograph had been copyrighted by your orator; and the said defendant, greatly to the injury of your orator, has thereby unjustly and unlawfully made and still makes great gains and profits which belong by right and according to law to your orator.

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XV. And your orator presents to this Honorable Court as exhibits in connection with this bill one of the said photographs copyrighted as aforesaid by your orator and owned by your orator, which is marked at one end "Complainant's Exhibit Copyrighted Photograph," and contained in a metal box marked "American Mutoscope & Biograph Co., New York, No. 2934 3071 foot length," and also labeled "2934 S Personal"; and also the infringing photograph manufactured and sold as aforesaid by the defendant which is marked "Complainant's Exhibit Defendant's Film."

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XVI. Your orator therefore prays:

1. That the said defendant Edison Manufacturing Company may be required by decree of this Honorable

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Court to account for and pay over to your orator the gains and profits which have accrued to or been received by the defendant by reason of the aforesaid unlawful acts, and all such gains and profits as would have accrued to your orator but for the unlawful doings of the said defendant, and all damages which your orator has sustained thereby.

2. That the said defendant be compelled by an order of this Court to deliver up to your orator all the copies of the said copyrighted photograph and all negative films thereof in the possession of the defendant or its representatives.

3. That the said defendant, Edison Manufacturing Company, its officers, agents, servants, workmen, employees and attorneys may be perpetually enjoined and restrained by a writ of injunction issued out of and under the seal of this Honorable Court, from directly or indirectly making or causing to be made, using or causing to be used, selling or causing to be sold any copies of your orator's said copyrighted photograph not purchased from your orator.

35

4. That this Honorable Court grant unto your orator an injunction *pendente lite* issuing out of and under the seal of this Court enjoining and restraining the said Edison Manufacturing Company, its officers, agents, servants, workmen, employees and attorneys in the same manner and to the same effect as heretofore prayed for in regard to a perpetual injunction.

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5. That the said defendant, Edison Manufacturing Company, may be required to make a full, direct and true answer (not however under oath, which is hereby expressly waived) to the matters hereinbefore alleged as if the said defendant had been specifically interrogated as to each.

6. That your Honor grant unto your orator a writ of subpoena *ad respondendum* issuing out of and under

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the seal of this Honorable Court directed to the said defendant, Edison Manufacturing Company, demanding it to appear and answer to the said bill of complaint, and to abide by such orders and decrees herein as to this Court may seem just, and as the equity of the case may require.

7. That the said defendant, Edison Manufacturing Company, may be decreed to pay the cost of this suit, and that your orator may have such other and further relief as the equity of the case may require.

AMERICAN MUSEOGRAPH & BIOGRAPHY CO.,  
By HARRY N. MARVIN,  
President.

KERR, PAGE & COOPER,  
Solicitors for Complainant.  
DRENT W. COOPER,  
Of Counsel.

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STATE OF NEW YORK, } ss:  
County of New York, }

HARRY N. MARVIN, being duly sworn, deposes and says that he is President of the American Mutoscope & Biograph Co, the complainant named in the foregoing bill of complaint; that he has read the same and knows the contents thereof to be true except as to those matters stated to be alleged on information and belief, and as to those matters he believes it to be true.

40 Subscribed and sworn to before me this 11th day of November, 1904.

(seal)

H. J. COLLINS  
Notary Public, 82

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**Affidavit of Frank J. Marion.**

STATE OF NEW YORK, } ss:  
County of New York, }

FRANK J. MARION, having been first duly sworn, deposes and says as follows:

I am of mature age and reside in New York City, and am employed by the American Mutoscope & Biograph Company as manager of the sales department.

One of the duties of my position to which I always give my personal attention is the securing of copyrights of photographs owned by the company. In pursuance of this duty I mailed to the Librarian of Congress on the 28th day of June, 1904, two copies of a photograph or reproduction of a succession of views, together with the title "Personal" and the required copyright fee, with a letter in the ordinary form prepared and prescribed by the Librarian of Congress, requesting him to record the said copyright.

In due course of mail, and within a period of two or three days thereafter, I received from the Librarian of Congress an acknowledgment in the regular form, of the receipt of the application and a notice that the copyright entry had been duly made under date of June 30, 1904.

The photograph sent as above stated was taken by Wallace McCutcheon, a photographer in the employ of the American Mutoscope & Biograph Company, on a strip of transparent celluloid film about 370 feet long, and it comprised more than 5000 views, the impressions of which were taken at a very rapid rate. The scenes depicted were specially prepared for at the studio of the Mutoscope Company. For this purpose specially skilled actors were employed to enact the parts of the principals in the scenes, and after the photographs were taken specially skilled artisans were employed for printing and preparing the same. The pantomime scenes were

carefully designed and rehearsed before the picture could be taken, and after the photograph was obtained, matching of the successive impressions to produce the desired effect required great skill and experience. So that most expert and skillful employees are required not only for the preparation of such scenes as were thus depicted, but the obtaining of the photograph and the finishing of the film likewise involves great expense and highly skilled labor.

The negative for the photograph entitled "Personal" was taken by a series of machine camera, and represents the scene set forth in paragraph IX of the bill of complaint. I attach hereto a copy of an advertising bulletin descriptive of this film which was issued by the American Mutoscope & Biograph Co. on August 15, 1904, and I mark it "Complainant's Exhibit Description of Film".

This photograph, or series of impressions, when it has passed through a suitable exhibiting machine and as a succession of impressions thrown upon a screen, produces a perfect illusion in a lifelike manner of the scene and actions intended to be represented. It has met with great popular success and is in great demand by exhibitors.

The photograph was not published until after the receipt of the notice from the Librarian of Congress that the copies had been filed and the copyright recorded. The films bearing said photograph before being published or sold have been stamped near one end with the following inscription: "Copyrighted 1904 by the American Mutoscope & Biograph Co." It was the intention of the American Mutoscope & Biograph Co. not to sell this "Personal" film, but to rent it only for use in theatres and the like, and had there been no infringing copy made that plan would have been followed, and it would have made us a greater and more lasting revenue from the copyrighted property.

But about the end of August, 1904, my attention was directed to the fact that the Edison Manufacturing

Company was advertising for sale a film entitled "How a French Nobleman Got a Wife Through the New York Herald 'Personal' Columns". I had known before that that the Edison Company was endeavoring to purchase one of our films, such attempt having been made by Mr. Waters, an agent of that company, through Mr. Steiner of the firm of Paley & Steiner, at No. 40 West 28th Street. Mr. Steiner made application to the American Company for a copy of the film, but was told that it was not for sale, being restricted to use in our biograph machines in the various theatres where they are used. The film was then on exhibition in the Biograph at the Keith Theatres in New York, Boston, Providence, Philadelphia, and in other theatres as well.

In the issue of September 17th of the New York Clipper the Edison Manufacturing Company advertised the sale of the film as a whole. Later, in the issue of October 8th of the same periodical, it advertised the film for sale in whole or in separate parts. I append hereto copies of the said advertisements marked respectively "Edison Company Advertisement No. 1" and "Edison Company Advertisement No. 2". I caused a copy of the Edison film so entitled to be bought, and I recognize that which is identified in the bill of complaint as "Complainant's Exhibit Defendant's Film" as being the one so purchased from the Edison Manufacturing Company. I also recognize the film marked "Complainant's Exhibit Copyrighted Photograph" as one of the films made by us and copyrighted as above set forth. Both of these are positive films ready for exhibition or other publication.

After Edison first began to advertise the infringing film we decided that it would be necessary for us to sell too, in order to compete with him. We therefore established the price of 16 cents a foot for the film, and he soon after cut the price to 15 cents. In this way great damage is done us. But besides this, other special damage arises out of this infringement, for the

58 matter of the infringement was at once brought to the attention of the Edison Manufacturing Company through our attorneys Messrs. Kerr, Page & Cooper, and every effort was made to secure, by friendly means, their withdrawal of the infringing film, but without avail. Our copyrighted film had been so great a success and was so well known that when the Edison film continued to be sold without interruption it tended to induce others also to infringe. In the issue of the New York Clipper for November 5th appears an advertisement of S. Lubin of Philadelphia, Pa., of the "Personal" film. Lubin has been a persistent infringer of the copyrighted films of others, and suits are now pending by us on copyrighted films against him.

54 I offer as an exhibit for use in connection with this affidavit the Certificate of Copyright of the photograph "Personal" and mark it "Complainant's Exhibit Certificate of Copyright." I also offer the communication from the Register of Copyrights dated June 29, 1904, a copy of which is embodied in the bill of complaint, and I mark the original "Complainant's Exhibit Notice of Entry."

56 On November 9, 1904, I had a conversation with Mr. Percy Waters, the agent of the Edison Manufacturing Company, at the office of that company No. 41 East 41st Street, New York City, in the course of which Mr. Waters said to me, as nearly as I can remember his words: "We would not have copied your Personal film if we had not been forced to do it. I had received letters from eight or nine managers demanding the film. It was up to us to supply it or lose the business, and inasmuch as you would not sell it to me, we had to get one the next best way. It has proven one of the best films I have ever used. In several houses it ran three weeks." I said to Mr. Waters: "This is a rather damaging admission for you to make to me because it will undoubtedly be used against you in a suit we are about to bring against the Edison Company." Mr. Waters replied: "I can't help that, facts are facts." Mr. Waters is, as I understand it, the agent in

57 charge of the New York office of the Edison Manufacturing Company. He appears to be, and is treated as being, in authority at its New York office.

FRANK J. MARION.

Subscribed and sworn to before me this 11th day of November, 1904.

H. J. COLLINS,

[SEAL.] Notary Public, 82.

# Complainant's Exhibit Notice of Entry.

LIBRARY OF CONGRESS, WASHINGTON, D. C.  
Copyright Office.

58 DEAR SIR:—Copyright entry has been duly made under date of June 29, 1904, in accordance with your application of June 28, '04 for 1 title Personal.

59 Upon receiving this notice your article can be produced with the statutory motive of copyright.

Should a certificate of copyright be desired, please remit for each entry the legal fee of 50 cents.

60 The law requires that two copies of the best edition of each article copyrighted shall be sent to the Library of Congress. If you have not already done so, when your work is printed or otherwise produced, send two copies addressed to The Librarian of Congress, Copyright Office, Washington, D. C., in compliance with the law.

Respectfully,

THEODORE SOLERSON,

Register of Copyrights:

THE AMERICAN MOTOGRAPH & BROADCASTING CO.,  
11 East 14th Street, New York, N. Y.

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**Complainant's Exhibit Certificate of  
Copyright.**

Class H XXc.  
1904, No. 47623.

Library of Congress, to wit:

Be it remembered,

That on the twenty-ninth day of June, 1904, American Microscope and Biograph Company, of New York, N. Y., hath deposited in this Office the title of a photograph the title of which is in the following words, to wit: "Personal, the right whereof it claims as proprietor in conformity with the laws of the United States respecting Copyrights.

HERBERT PUTNAM,

Librarian of Congress.

By THORVALD SOLBERG,

Register of Copyrights.

63 Office of the Register of Copyrights,  
Washington, D. C.

I hereby certify that the foregoing is a true copy of the original record of copyright. In Witness Whereof, the seal of the Librarian of Congress has been hereto affixed this eighth day of September, 1904.

HERBERT PUTNAM,

Librarian of Congress.

By THORVALD SOLBERG,

Register of Copyrights.

64 (SEAL)  
Office of the Register of Copyrights,  
Washington, D. C.

Form D.

From April 5, 1899, to Dec. 31, 1900.

Written A. J.

Revised, J. W. J.

Mailed W. J. P.

66

**Complainant's Exhibit Edison Co., Adv.  
No. 1.**

676 The New York Clipper. September 17.

Send for	Net prices
new film pocket edition,	Class A films, 15 cents
No. 225.	per foot.
New film supplement No. 220.	Class B films, 12 cents
Edison Exhibition Kinetoscope, \$115.00	per foot.
	Edison Universal Kinetoscope, \$75.00

Edison Films

Latest Feature Subjects:

Two Pronounced Hits:

European Rest Cure.	How a French Nobleman Got a Wife Through the New York Herald "Personal" Column.
	Exercisingly Funny, Fine Photographically. The "Personal" actually appeared in The N. Y. Herald of Aug. 25th, 1904, 676 ft. A.

Edison Manufacturing Co.

Main office and factory, Orange, N. J.

New York Office: 89 Chambers St. Cable

Address, Kew-Forest, New York.

Office for United Kingdom: 25 Clerkwell

Road, London, E. C., England.

Selling Agents:

The Kinetograph Co., 41 E. 1st St., New York.

Peter Dacigalupi, 789-788 Mission St.,

San Francisco, Cal.

**Complainant's Exhibit Edison Co., Adv.  
No. 2.**

October 8. Net Prices: 705  
Send for Class A Films, 15 cents per foot.  
New film pocket Class B Films, 12 cents per foot.  
edition, No. 223. Edison Universal Kinetoscope,  
New film Supple- Edison Universal Kinetoscope,  
ments Nos. 220  
and 222.  
Edison Exhibition Kinetoscope.

Edison Films.  
\$116.00 Latest Feature Subjects: \$75.00.

European Best Cars.  
Most Beautiful and Interesting Picture in  
Eleven Scenes—"All Aboard", "An Revolt",  
"Dropping the Pilot", "The Storm", "Kissling  
the Blarney Stone", "Doing Paris", "Climbing  
the Alps", "Hold Up in Italy", "Climbing  
the Pyramids", "And Baths of Germany", "Home  
Sweet Home",..... 500 ft. A

Military Manoeuvres, Massanes, Va.  
Reproduction of the Battle of Bull Run,  
General Grant, Corbin, Bell and Chaffee  
"Giving Orders", "Skirmish Line in Action",  
"Artillery in Action", "Infantry Charge".  
..... 265 ft. A

72 How A French Nobleman Got A Wife Through the  
New York Herald "Personal" Column.  
The "Personal" actually a Great "Hit",  
appeared in the N. Y. Herald  
of Aug. 25, 1904.  
12 Cents Per Foot, Class B. Class B, 12 Cents Per  
Foot.

Sold complete or in separate scenes as follows:  
"Personal Ad." and "Noblesse", 60 ft.; "Grant's  
Tomb", 85 ft.; "Riverside Drive", 45 ft.; "Across  
the Field", 60 ft.; "Down the Sand Bank", 80 ft.;

"Through the Woods", 75 ft.; "The Rail Fence",  
110 ft.; "Down the Pike", 55 ft.; "Caught at Last",  
95 ft.

Edison Manufacturing Co.  
Chicago Office, 304 Wabash Avenue.  
Main Office and factory, Orange, N. J.  
New York Office: 83 Chambers St., Cable address,  
Kurilian, New York.  
Office for United Kingdom: 25 Clerkenwell Road,  
London, E. C., England.

Selling Agents:  
The Kinetograph Co., 41 E. 21st St., New York.  
Peter Macgregal, 786-788 Mission St., San Fran-  
cisco, Cal.

**Affidavit of Harry N. Marvin.**

STATE OF New York }  
County of New York } ss:

HARRY N. MARVIN, being duly sworn, deposes and  
says as follows:

I am of mature age and reside in New York City.  
I am President of the American Mutoscope & Biograph  
Company above named. I attach hereto as exhibits  
the certificate of organization of the American Muto-  
scope Company, the certificate of change of name of  
American Mutoscope Company to American Muto-  
scope & Biograph Company, and the certificate of  
the incorporation of the Edison Manufacturing Company,  
and mark them respectively "Complainant's Exhibit  
Complainant's Charter", "Complainant's Exhibit Cer-  
tificate of Change of Name" and "Complainant's Ex-  
hibit Defendant's Charter". My company, under its  
present name and under the name used for it when  
incorporated, has been for about eight years past en-  
gaged in the business of making, using and selling  
photographs representing objects in actual motion.



77 For carrying on that business the said company maintains in New York City a salesroom and studio. Its studio has been fitted up at very large expense with all the appliances, apparatus and materials for the production of photographs of the kind described. In producing them it is necessary to provide not only the photographing apparatus and materials and to employ skilled and experienced artists for the manipulation of the apparatus, but also to maintain a complete theatrical and stage equipment and setting for scenes to be depicted, together with competent actors and pantomimists to enact the scenes sought to be photographed, in addition to which we employ at large salaries skillful assistants for the conception, arrangement, setting and rehearsal of the scenes to be produced. Besides the studio which we maintained for this purpose, and which is really a small theatre with all the accessories and appliances, we have facilities for enacting and photographing scenes out of doors at 78 points and places of popular interest, some of which represent novelties, such as the launching of vessels and the like, while in other cases we have pantomimes specially enacted in places either of popular interest or of great natural beauty. The maintenance of an establishment for conducting a business of this sort is necessarily very expensive. When the photographs are taken and reproduced for exhibition we rent the films, or sell them, or both, for exhibitions all over the country.

80 In order to get some adequate return for this great outlay we copyright substantially all of our films and endeavor to comply with the statutory requirements both in regard to registration and in giving notice to the public of our rights; thus on every copy of a copyrighted film we stamp notice in these words, "Copyrighted by the American Mutoscope & Biograph Co., together with the year of registration. It is our custom, as in the case of the "Personal" film, to stamp this notice on the substance of the film and in a visible and conspicuous place near the front end thereof.

81 I am the same Harry N. Marvin who executed the bill of complaint herein, and I confirm all that is said there, and offer that as an affidavit for use in the motion for preliminary injunction which I understand is about to be brought against the defendant restraining it, during the pendency of this suit, from further infringing our copyright. I have read the affidavit of F. J. Marion and confirm all that he says. The facts stated by him are within my personal knowledge, except as to conversations which he had, 82 and as to these I believe what he says:

The film here in question, the "Personal" film, has been a very popular one, drawing great attention, and for a time it brought us large returns. With the commencement of the Edison Company's infringement, however, our profits fell off and we have been compelled to compete with it just as though no copyright existed.

83 The scenes which are enacted on our copyrighted "Personal" film were specially created and designed under the direction of Mr. Marion by our employees. The photographing was done on June 8-15, 1904, by Mr. McCutcheon, one of our employees, with a machine camera specially designed and protected by letters patent, and all of these matters contributed to the great expense incident to the creation of this film. The action, so to speak, of the photograph is centered about Grant's Tomb, that being a place of chief interest, and without that there would be neither point nor 84 moral to the tale accomplished in the photograph. It is this part in particular that the Edison Company has chosen to copy most closely.

In our business we are constantly producing films of generally similar character to this one and substantially all of them are being copyrighted. Unless strict respect be paid to the copyrights our business will be greatly lessened and irreparable injury done us. In the present case the film which should have returned us many thousands of dollars has probably not earned half of what it would have done had not the Edison

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Company infringed our copyright. The public with whom we deal have been taught, so far as we could do so by notice and the like, to respect copyrights of this character. If it be found that they are being infringed with impunity, as in the present case particularly, (for this is an unusually well known film) those who have heretofore used our films will be induced to take infringing copies of them, which naturally can be made at much less expense than ours.

86

Subscribed and sworn to before me this 11th day of November, 1904.

(SEAL)

H. J. COLLINS  
Notary Public, 82

87

### Affidavit of Drury W. Cooper.

STATE OF NEW YORK,  
County of New York, ss:

DRURY W. COOPER, being duly sworn, deposes and says as follows:

88

I am an attorney and counsellor-at-law, and a member of the firm of Kerr, Page & Cooper, counsel to the American Mutoscope & Biograph Company. The matter of the infringement of that company's "Personal" film copyright was brought to our attention toward the end of August of the present year, and the infringement seemed so palpable that it occurred to us at once that it may have been inadvertent. Not desiring to involve our client in litigation if it could be avoided, we called the matter to the attention of Mr. Frank L. Dyer, of Orange, N. J., counsel to the Edison Company, and laid the subject fully before him. Considerable correspondence passed between us and Mr. Dyer, and we had several interviews with him, all

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looking toward the settlement of the matter, but it remained open and unadjusted until a few days ago when Mr. Dyer notified us, both by letter and orally, that settlement could not be effected. At the time of receiving that notification I was engaged in the cross-examination of an expert witness in an equity suit on a patent and my time was occupied for several days thereafter with that matter and with the preparation of a motion for preliminary injunction in another case. As soon as those matters were disposed of and I was able to have a full exchange of views with representatives of my client, I took up the preparation of the papers in this case.

There has been no intention on our part to delay the assertion of our rights, but throughout the whole negotiation with the Edison Company's representatives we have insisted upon them; although the negotiations were somewhat prolonged. That was due partly to the occasional absence of one or the other of the parties to the negotiation from their place of business on vacations and the like, and partly to the time necessarily consumed in referring matters from counsel to client and back again to opposing counsel.

DURRY W. COOPER.

Subscribed and sworn to before me this 11th day of November, 1904.

(SEAL)

M. LAWRENCE DYER,  
Notary Public (76).

N. Y. Co.,

N. Y.

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**Rebuttal Affidavit of Frank J. Marion.**

STATE OF NEW YORK, }  
County of New York: } ss:

FRANK J. MARION, being duly sworn, deposes and says:

94 I am the same Frank J. Marion who has made affidavit in this case. I have read what I am credibly informed and believe are copies of affidavit to be submitted on behalf of the defendant and executed respectively by Thomas A. Edison on December 3rd, Alexander T. Moore, on December 2nd, Edwin S. Porter on December 3rd and Percival L. Waters on December 6th. I have visited a number of times the office of the Edison Manufacturing Co. which is at No. 41 East 21st Street, New York City, and I believe that Mr. Waters is the agent in charge of that office, and that he is the person in authority there. On the outside of the building is the sign "Edison Mfg. Co., Kinetoscope & Film Dep't." On the elevator door at the floor on which Mr. Waters has his office is the sign "The Edison Mfg. Co. Film Dep't and Kinetograph Co." On the hall door of the office where Mr. Waters has his desk, and of which he is sole occupant, is the sign "The Edison Mfg. Co. Projecting Kinetoscope and Film Dep't. Kinetograph Co." Mr. Waters name does not appear on the building, elevator door or hall door. Mr. Edwin S. Porter is also an acquaintance of mine, and he seems to act under the direction of Mr. Waters. Mr. Porter's office, or so-called studio, is run in connection with Mr. Waters' office at 41 East 21st Street, above referred to.

96 I observe that Mr. Edison states in his affidavit that "it has always been the practice of the Edison Mfg. Co. to abstain from the copying of copyrighted photographs." I do not know about the copying of the copyrighted photographs of others, but I do know that during the present year that company copied a copy-

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righted photograph of ours entitled "Animated Picture Studio". That it was sued in the above entitled Court for that infringement, the case being entitled the same as the present one, and that no opposition was made to the entry of a decree, which was dated about June 13, 1904, in pursuance of which an injunction issued and was served. Another case, similar to that just mentioned, occurred recently. By assignment from one Gaumond, this company became the proprietor of a photograph entitled "Three Little Maids"; this was copyrighted by us on July 18, 1904. On October 29, 1904, the Edison Mfg. Co. advertised in the New York Clipper the sale of the same film. My best information is that the foreign agents of the Edison Company secured an original of this film and sent it over to the defendant who made a duplicate negative therefrom, from which negative, positive copies were made for use and distribution.

In the affidavit of Mr. Porter, taken on behalf of the defendant, it is stated that "the usual practice is to use a new film for each scene, unless the scenes are short and taken at the same or adjacent points." This is quite misleading, for any number of scenes may be taken upon a single film, the only limitation being the length of the film manufactured by the Eastman Kodak Company, which has a substantial monopoly in the production of these films, and from which substantially all film users in this country purchase. The length of the film has nothing to do with the artistic or photographic aspect. It is true that the photographer will endeavor to judge the length of his film in such a way that the taking of any one scene is not interrupted by reaching the end of the film. Other than this, it is the custom to continue to photograph as long as the film lasts.

100 I observe that Mr. Porter says "such a series of scenes, however, is really an aggregation of several series of negative impressions, each series constituting one photograph and each scene is generally sold separately, so that a purchaser or exhibitor may obtain

101 one scene, or two scenes, or the entire series of scenes, as he wishes." My company does not sell the scenes separately, but sells the photograph or film in its entirety. Besides this, the Edison Mfg. Co., as I am informed and believe, has caused its entire film, comprising a series of scenes, to be copyrighted as a whole. This, I understand, is what was done with the defendant's film used on in this case.

I observe that Mr. Porter says that "in engaging 102 performers for producing a pantomime the persons whom he selects are persons who have usually acted in pantomimes for the American Mutoscope & Biograph Co." Whatever Mr. Porter's Company may do in that regard, it is not true of my company. We do not select the persons who have acted for others. His citation of the production by us of the film like his "Beverly Kiss" is misleading. In that case, the characters to whom he refers came to our studio and represented that they 103 were regular vaudeville performers, and said that they executed the act in question in concert halls and the like, and they offered to let us photograph their act for \$25. They did not say, nor did we know, that the Edison Company had photographed them in the act. We agreed to their proposition and produced the film. I am informed and believe that the Edison Company did not copyright its film. If it has done so, we will gladly destroy our negatives, as well as those of any other film which infringes a copyright of another.

104 Mr. Porter refers to a film of his company known as "A Tramp's Skate." We have no such film, but have one not at all like his, but representing an Irishman wearing roller skates.

Mr. Porter says that he is informed that our film "Personal" was merely the acting of a joke which appeared in a series of pictures in a comic paper, and that one of the talent or performers in pantomime for moving pictures informed him that he had seen: this paper on the desk of Wallace McCutcheon, manager of our picture department. There is, so far as I know,

absolutely no foundation for that statement. I originated the idea of the film. I personally wrote out the sketch or suggestion for it, and laid it out before Mr. Harry N. Marvin, the president of my company. He approved it and sent it to Mr. McCutcheon, our photographer. It lay on Mr. McCutcheon's desk for a long time awaiting its turn for consideration. Mr. McCutcheon has informed me, and I believe it to be the fact, that he never made such a statement as is attributed to him. If he or any one else did make such a statement it was in error. I never saw such a series of pictures in a comic paper as is referred to, and I don't believe that they existed. The idea was original with me, and was developed by me. I will here call attention to the fact that the wording of the "Personal," about which the story demands in the film is woven, was on the original memorandum to which I have referred; the wording of this appears in the printed description attached to my former affidavit in this matter, and which is marked 107 "Complainant's Exhibit Description of Film." On the defendant's film, and appearing as a part of the same, is their advertisement, which is a literal copy of that, except for one word.

I observe that Mr. Waters states that he is a more jobber for the Edison Mfg. Co., and that in quoting prices on Edison films he does it on his regular basis as a selling agent for the Edison Mfg. Co. Some weeks ago I personally negotiated with him for the purchase of a number of Edison films, 108 and I asked him for a trade discount on them. He told me that he could not give me a discount without reference to his company, meaning the Edison Mfg. Co.

I observe that Mr. Waters gives his recollection of the conversation which he had with me on November, 1904. Within a few minutes after ending that conversation, and immediately upon returning to my office, I made a written memorandum of the same, and I believe it

100

to be correct in all substantial and material respects.  
That memorandum reads as follows:

"NOVEMBER 9th, 1904  
Time—2.45 }

"I have just returned from the office of the Edison Mfg. Company at No. 41 East 21st Street, and upon the advice of Mr. Page of Kerr, Page & Cooper, attending certain parts of the conversation which occurred there between myself and Mr. Percy Waters, the agent of the Edison Mfg. Co. of Orange, N. J. I am doing this in order that I may have a record of the conversation while it is perfectly fresh in my mind.

"Mr. Waters said to me "we would not have copied your 'Personal' film if we had not been forced to do it. I had received letters from 8 or 9 managers demanding the film. It was up to me to supply it, or lose the business, and inasmuch as you would not sell it to me, I had to get one the 'next' best way. It has proven one of the best films I have ever used. In several houses it ran three weeks." I said to Mr. Waters, this is a rather damaging admission for you to make to me because it will undoubtedly be used against you in a suit which we are about to bring against the Edison Company. Mr. Waters replied "I can't help that,—facts are facts."

FRANK J. MARION.

Subscribed and sworn to before me this 17th day of December, 1904.

(SEAL)

H. J. COLLINS,  
Notary Public, 81,  
N. Y. Co.

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### Rebuttal Affidavit of Harry N. Marvin.

STATE of New York, ss:  
County of New York, ss:

HARRY N. MARVIN, being duly sworn, deposes and says:

I have already made affidavit in this matter. I have read the affidavit of Mr. Marion, just executed, and I have also read what I believe to be copies of the defendant's affidavits herein.

My information as to the relations between Mr. Percival Waters and the Edison Mfg. Co. is to the same effect as has been stated by Mr. Marion.

I confirm as being true of my own knowledge all that Mr. Marion says regarding our relations with the Edison Company, with reference to copyrighted films and all matters which he states regarding our business and the production of our films.

I desire to confirm specifically what Mr. Marion says about the production of the "Personal" film. Mr. Marion originates a great many suggestions or ideas for films of the character of that in suit. In the case of the photograph "Personal", he wrote out a description or sketch of the action which is there portrayed, including a supposed "Personal" advertisement, and he submitted it to me for approval. I approved it, and it was passed on to Mr. McCutcheon, who is in charge of the taking of photographs. I never heard, and I do not believe, that Mr. Marion based his sketch upon any series of pictures in a comic paper. I never saw such a series of pictures and I never heard of it until I read defendant's papers. I believe that the idea was original with Mr. Marion. I never showed Mr. McCutcheon a paper containing any such pictures or series of pictures as that to which Mr. Porter refers in his affidavit, and never made a suggestion based thereupon. The whole thing is a matter either of pure fabrication or of misunderstanding.

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ing. The facts are as Mr. Marion has stated and as I have stated.

I am familiar with the facts regarding the "Bowery King", "Trump's State", "Animated Picture Studio" and "Three Little Maids" films, and I confirm what Mr. Marion says regarding them.

HARRY N. MARVIN.

Subscribed and sworn to before me this 17th day of December, 1904.

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(SEAL)

H. J. COLLINS,

Notary Public, St.  
N. Y. Co.

#### Rebuttal Affidavit of Wallace McCutcheon.

119

STATE OF NEW YORK, } ss:  
County of New York.

WALLACE MCCUTCHEON, being duly sworn, deposes and says:

I am of mature age and reside at

I am the photographer for the American Microscope & Biograph Co. I have read Mr. Marion's affidavit in this matter and what I believe to be copies of the affidavits of the defendant referred to by him. I confirm what Mr. Marion says about the practice of taking pictures by this company, and I am in a position to know, because I take these pictures. Mr. Marion originated the idea of the "Personal" film, writing a memorandum or sketch of the same, submitted such memorandum (which was in his own handwriting) to Mr. Marvin, president of the company, who approved the same and passed it on to me to be carried out. The memorandum lay on my desk for a considerable time awaiting action. The whole idea was, so far as I know, original with Mr. Marion.

I never saw any comic paper which contained a series of pictures suggesting the idea illustrated and carried out by the personal film, and I never said to anybody that I had seen such a paper. I don't believe such a one is in existence, and I never heard of it until it was suggested in the defendant's papers. Once in a conversation with Mr. Edwin S. Porter, who makes affidavit for the defence, and whom I know personally, I told him that I had had a sketch or memorandum of the film on my desk for a long time; meaning, and intending to convey the meaning, that Mr. Marion's sketch or memorandum had been on my desk for a long time before the pictures were actually taken, and such was the fact, but I never admitted, or said anything which was intended to be an admission, that Mr. Marion had taken the idea from a comic paper, for such was not the fact, so far as I know.

The said views for the "Personal" film have in suit were taken at Englewood, N. J., and Mr. Porter has told me in conversation that he obtained that information from us through indirect means before he took the pictures. I do not know where Mr. Porter got the supposed information that they were taken partly near Grantwood, N. J., and partly near Paterson. He certainly had correct information on that subject. If, as he told me the case, he sent a man to us to ascertain the facts before he took his pictures.

I never claimed, and do not now claim, to have originated the idea or sketch of the "Personal" film. I simply carried out Mr. Marion's sketch. No "person" appeared as a series of pictures, of which joke the "Personal" film is "merely the acting," as is stated in Mr. Porter's affidavit. There is no truth whatever for that statement, or any statement of the same or similar import. Whoever saw a sketch of the "Personal" film on my desk saw a written memorandum or description

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thereof made by Mr. Marion, approved by Mr. Marvin,  
which sketch lay on my desk for a long time.

WALLACE McCUTCHEON.

Subscribed and sworn to be: }  
for me this 17th day of }  
September, 1901. }

[SEAL.] H. J. COLLINS,  
Notary Public, 81,  
N. Y. Co.

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Description of Positions of Camera in Taking Views  
for Complainant's "Personal" Photograph supplied at  
request of the Court:

FIRST POSITION: Camera 300 feet south of Grant's  
Tomb, pointed so as to show entrance to tomb and full  
width.

SECOND POSITION: Camera sufficiently far south of  
Grant's Tomb to get full height of tomb in the back-  
ground.

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THIRD POSITION: Through the tall grass. Camera  
placed on the River road about 7½ miles north of Fort  
Lee Ferry, on the Jersey side of the North River.

FOURTH POSITION: Englewood Golf Ground. Cam-  
era so placed as to show a narrow plank crossing a  
small stream.

FIFTH POSITION: Over the rail fence. Camera placed  
near the Golf Ground at Englewood.

SIXTH POSITION: Down a path in the park; camera  
placed four or five city blocks distant from the Fort  
Lee Ferry.

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SEVENTH POSITION: Down a bank. Camera placed  
near the city line of Paterson, N. J., as it is approached  
from the Englewood side.

EIGHTH POSITION: In a field, about three city blocks  
west of scene No. 7.

These positions were carefully chosen so that, when  
the impressions were joined in one photograph, the  
action would appear continuous and natural.

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**United States Circuit Court,**

**DISTRICT OF NEW JERSEY.**

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AMERICAN MUTOSCOPE AND BIOGRAPH  
COMPANY,

*Complainant,*

*vs.*

EDISON MANUFACTURING COMPANY,

*Defendant.*

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**Defendant's Affidavits in Opposition to Complainant's  
Motion for Preliminary Injunction.**

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FRANK L. DYER,

*Solicitor for Defendant.*

DELOS HOLDEN,

FRANK L. DYER,

MELVILLE CHURCH,

*Of Counsel.*



# United States Circuit Court

DISTRICT OF NEW JERSEY.

AMERICAN MICROSCOPE & BIOGRAPH  
COMPANY,  
Complainant,

vs.

EDISON MANUFACTURING COMPANY,  
Defendant.

In Equity.

STATE OF NEW JERSEY } ss.:  
County of Essex.

THOMAS A. EDISON being duly sworn on oath says:  
I am of mature age and reside at Llewellyn Park,  
Orange, New Jersey. I am the President of the Edi-  
son Manufacturing Company, the defendant herein. I

have read the affidavits filed in behalf of the complain-  
ant in this suit, and desire to state that Frank J.  
Marion is entirely mistaken when he states that Mr.  
Percy Waters, or Percival Waters, is the agent in  
charge of the New York office of the Edison Manu-  
facturing Company, and that he is treated as being in  
authority at its New York Office. Mr. Percival Waters  
is not an agent of the Edison Manufacturing Com-  
pany; he has no power to bind the Edison Manu-  
facturing Company in any way whatsoever, and  
the said company is not responsible for his  
acts. His only relation to the Edison Manu-  
facturing Company is that of a jobber  
or dealer in kinesiographic films. He purchases

6 such films from the Edison Manufacturing Company, and also, as I am informed and believe, purchases and sells films of other makes, as he is not bound to deal only in Edison films.

It has been my practice to copyright all films produced for and owned by me and to prevent the copying of such photographs by unauthorized persons; and it has always been the practice of the Edison Manufacturing Company to abstain from the copying of copyrighted photographs.

7 I have been connected with the moving picture business for many years, and as far as I am aware it has never been considered that a copyright upon a moving picture photograph covers the plot or theme which the exhibition of the moving pictures portrays. For instance, a short time ago I copyrighted a film showing the holding up and robbing of a railroad train, and not long after this other moving picture dealers placed films on the market illustrating this subject, but which films were not duplicates of my

8 film. When it was decided to produce a film to illustrate the joke upon which complainant's film "Personal" is based, Mr. Edwin S. Porter was instructed to do no copying of complainant's film, but to portray in photograph his own conception of the characters, costumes, gestures, postures, etc., throughout the various scenes, and these instructions in my opinion he has faithfully carried out, as appears by a comparison of the two films, and especially a comparison of the

THOMAS A. EDISON.

Sworn to and subscribed before me this 5th day of December 1904.

(SEAL)

J. F. RANDOLPH,  
Notary Public for N. J.

UNITED STATES CIRCUIT COURT

DISTRICT OF NEW JERSEY.

AMERICAN Mutoscope & Biograph  
Company,

Complainant,

vs.

EDISON MANUFACTURING COMPANY,  
Defendant.

In Equity.

STATE OF NEW JERSEY, } ss.:  
County of Essex.

ALEXANDER T. MOORE, being duly sworn on oath says:

I am of mature age and reside at Orange, New Jersey. I am the Manager of the Kinetoscope Department of the Edison Manufacturing Company, the defendant herein. The moving picture films entitled "How a French Nobleman Got a Wife Through the New York Herald 'Personal' Column," and on sale by the Edison Manufacturing Company are made from an original photograph or negative designed and taken by Edwin S. Porter of New York City. The said photograph or negative is owned by Thomas A. Edison of Orange, New Jersey, and was copyrighted by him under the date of August 26th, 1904, his application for copyright, together with a printed copy of the title and two copies of the photograph having been received by the Librarian of Congress on that day, as appears from certain records on file in my office. The Edison

- 18 Manufacturing Company is licensed by Thomas A. Edison to produce and sell copies of this photograph.

ALEXANDER T. MOORE

Sworn to and subscribed  
before me this 2nd day  
of December 1894.

J. F. RANDOLPH  
Notary Public for N. J.

[Seal]

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# UNITED STATES CIRCUIT COURT

DISTRICT OF NEW JERSEY.

AMERICAN MOTORCYCLE & BIOGRAPH  
COMPANY,  
Complainant,

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vs.

In Equity.

EDISON MANUFACTURING COMPANY,  
Defendant.

STATE OF NEW JERSEY, } ss.:  
County of Essex.

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EDWIN S. PORTER being duly sworn on oath says: I am of mature age and reside in the Borough of Manhattan, City and State of New York. My occupation is that of a photographer and I devote my time more especially to that branch of photography, which relates to the production of so-called moving pictures. I have been thoroughly familiar with this class of work for many years and have produced many pictures of this character. I am familiar with all the steps necessary to the production of such pictures, and with the

general practice in this branch of photographic art. Such pictures are taken by means of a camera, specially designed and adapted for the purpose, by means of which successive photographs of the same object or objects are taken at rapidly succeeding intervals upon a suitable strip of sensitized film constituting the negative, each exposure being for a very short period of time and a large number of exposures being taken in a second, so that moving objects are photographed in a great many different positions, whereby when the positive of such photograph is used with a proper machine for projecting the pictures upon a screen in rapid succession, the appearance of actual motion is produced.

It has been a common practice among photographers in this art to produce moving pictures by means of such a camera placed in a single position, in order to depict a single event, such as the launching of a vessel or the run of a fire department. In this class of pictures all the exposures are taken upon a single sensitized film, which is afterwards developed into a negative and from which a positive film is then produced for the purposes of exhibition, and the background of each picture of the film is exactly the same, except when the camera is turned on a pivot to a different point of the coarses.

It has also been a common practice to build up long series of moving pictures in the following manner: A number of performers go through certain acts in pantomime and illustrate in this manner the plot of a theme, story, joke or play composed of a number of different scenes, taken often at widely separated view points, whereby the background of one scene or set of pictures is entirely different from that of another set or scene. Very often the taking of a complex series of pictures of this character occupies several weeks, and may include six or eight different acts or scenes taken from so many different view points. It is practically impossible for a photographer to obtain all the large number of exposures necessary upon a single film, and it is the usual practice to use a

21 new film for each scene, unless the scenes are short and are taken at the same or adjacent points. Where the view points are widely separated, all of the pictures are seldom taken the same day, and the different scenes are almost invariably taken upon different films. Furthermore, the photographer generally aims to take more exposures than are necessary, in order that he may trim off some of the pictures from both ends of the film and thereby produce what he considers a fitting and attractive beginning and end to the scene. Such a series of moving picture scenes is therefore generally made up by producing several negative films and using them to produce a positive film upon a single long continuous strip. Such a series of scenes, however, is really an aggregation of several series of negative impressions, each series constituting one photograph and each scene is generally sold separately, so that a purchaser or exhibitor may obtain one scene, or two scenes, or the entire series of scenes, as he wishes.

The acting of pantomimes for the production of moving pictures such as I have described is usually done by certain persons who form a class commonly known as "the Idiot". The same persons pose or act for different producers of moving pictures in this locality; that is to say, in engaging performers for producing a pantomime, the persons whom I select are those who have usually acted in pantomimes for the American Mutoscope & Biograph Company and for other producers of moving pictures. It is perhaps due to this fact that similar pantomimes have been used by 24 different manufacturers for producing moving picture films. For example, not long ago I engaged two persons known as "Kid" Foley and "Sailor Lil" and photographed a pantomime which may be described as "A Bowers Kiss." This pantomime was originated by me and at that time had never, to my knowledge, been produced in public. A short time after the photograph produced by me had been placed on the market, the American Mutoscope & Biograph Company, complainants, herein, produced a film illustrating the same pantomime by the same performers. I also used a certain

pantomime to produce a moving picture film known as "A Trump's Bust," and the same pantomime was afterwards used by complainants for producing a film.

I have seen the moving pictures produced by the exhibition of complainant's film entitled "Personal." The first time I saw the same at a public exhibition in Keith's Theatre, New York, probably a short time after the film was first exhibited. I immediately noted that the picture belonged to a class which are called—"chase pictures"—that is to say, one or more persons are chased by others through various different scenes. A large number of moving pictures illustrating this plot have been produced prior to June 22, 1904, the date of complainant's copyright. For instance, I remember one entitled "A Day Light Burglary" in which a thief or burglar is pursued by persons endeavoring to capture him. I remember another film in which a pick-pocket is pursued, another in which poachers are pursued and another in which train robbers are pursued. In the two former films the scenes are laid in the city, while in the two latter, the scenes occur in the country.

Another fact made obvious by the exhibition of complainant's film was the fact that it was in no sense a single photograph, since the view points are not the same in all the views. It is an aggregation of several views or scenes, one taken immediately in front of Grant's Tomb, another about two hundred yards distant and several others taken amid rural surroundings. I have been informed and believe that the rural views were taken partly near Grankwood, New Jersey and partly near Paterson, New Jersey. It is impossible for all the views to have been taken at a single view point even with a camera pivoted so as to take a panorama, because there are no such landscapes at Grant's Tomb as are photographed in the rural scenes and the view point of the Riverside Drive scene is obviously different from that of the opening scene which is closer to Grant's Tomb. Furthermore, as it takes considerable time to arrange such pantomimes, some of the views were probably taken on different days and on different films from others of the views. I

29 have been informed and believe that the taking of the pictures occupied three different days. My opinion is that four or five separate sensitized films were used, and that these films contain as many as five or six different series of impressions, each portraying a different scene.

A short time after seeing the said exhibition, in a conversation with one of the talent or performers in pantomimes for moving pictures, I was informed that complainant's film "Personal" was merely the acting of a joke which appeared as a series of pictures in a comic paper, and that the said performer has seen this paper on the desk of Wallace McEnteehan, a photographer in the employ of the American Mutoscope & Biograph Company.

80 It occurred to me after seeing the exhibition of complainant's film "Personal"—that I could design a set of photographs based upon the same joke, and which, to my mind would possess greater artistic merit. My conception of the principal character representing the French Nobelman was entirely different from that of complainant's film, as regards costume, appearance, expression, figure, bearing, posing, posturing and action.

81 At the time I was commissioned by Mr. Ellison to produce the film which was afterwards entitled—"How a French Nobelman Got a Wife Through the New York Herald Personal Columns", I started in my usual manner of preparing pictures of this character by engaging the pantomime performers and instructing them as to the scenes which I wished to have enacted. The said film was produced by me according to my usual practice, by making photographs of the pantomime performers costumed and arranged according to my conception and design and carrying out the pantomime with such settings and in such a manner as to produce my ideal of an artistic photograph. The negative prepared by me did not and does not contain a single copy of any of the pictures of complainant's films. Each impression is a photograph of a pantomime arranged by me and enacted

for me and at the expense of the owner of the film which I produced. My photograph is not a copy, but an original. It carries out my own idea or conception of how the characters, especially the French Nobelman, should appear, as to costume, appearance, expression, figure, bearing, posing, gestures, postures and action. Complainant's Frenchman is short, mine is tall; their dresses in poor taste, mine dresses in good taste; theirs presents an undignified appearance, mine is of gracious and gentlemanly bearing. Theirs looks and behaves like a monkey—mine like a gentleman. These differences I believe I have made apparent in every picture of the series, by means of the said costume, poses, postures, action, etc.

The first pantomime for my photograph was enacted at my studio situated in New York City and shows the principal character looking for his personal in the Herald which he finds and peruses with interest; he then puts the finishing touches to his costume in order to set out for the meeting place. This scene enables the principal character to be seen at close range, so that his make-up, costume, boutonniere, facial expression and bearing may be appreciated by the audience.

85 The next scenes were taken at Grant's Tomb and on Riverside Drive at approximately the points which were selected for the pantomime photographed by complainant. For this reason it is inevitable that the backgrounds are somewhat similar. The characters photographed by me were, however, different persons, differently attired and arranged, and throughout it was my intention, as I have stated, to produce a set of photographs which should illustrate the joke according to my ideas of how it should be most effectively and artistically illustrated. The city scenes are followed by rural scenes taken at our Englewood, New Jersey. The various scenes were taken upon different sensitized films. As nearly as I can remember the opening or studio film was taken upon one film, the Grant's Tomb and Riverside Drive scenes upon another film, and the remaining scenes upon two more. The cost of producing this film was, of course,

87 as great as and probably greater than that of complainant's film, since it is purely and entirely an original—not a duplicate, and portrays more separate scenes. This photograph or series of photographs was produced by me for Thomas A. Edison of Orange, New Jersey, to whom I assigned my entire right, title and interest in the same.

This set of photographs has been placed on the market by the Edison Manufacturing Company under the title—"How a French Nobleman Got a Wife  
88 Through the New York Herald Personal Column." Not long after it appeared, I had a conversation with Mr. Wallace McCutcheon, Complainant's photographer, in which he remarked that I had taken the idea of this film from complainant's film entitled—"Personal." I replied that they could not complain on that account, because they had taken the idea from a comic paper; Mr. McCutcheon admitted to me that this was the case; that Mr. Harry N. Marvin the President of the American Mutoscope & Biograph Company had shown him the paper and suggested that he get up a film along the lines illustrated therein.

Sworn to and subscribed before me this 3rd day of December, 1904.

[SEAL] J. F. RANDOLPH,  
Notary Public for N. J.

## UNITED STATES CIRCUIT COURT,

DISTRICT OF NEW JERSEY.

AMERICAN MUTOSCOPE & BIOGRAPH  
Co.,  
Complainant,

vs.

EDISON MANUFACTURING COMPANY,  
Defendant.

In Equity.

STATE OF NEW YORK } ss:  
County of New York }

PERCIVAL L. WATERS, being duly sworn, on oath says: I am of mature age and reside in New York City. My occupation is that of an exhibitor and dealer in moving picture films. I am not employed by the Edison Manufacturing Company and am not an agent of said company. I have no power to bind the said company by contract or otherwise, and the said company is not responsible for my acts or doings. My only relation to the Edison Manufacturing Company is that of a jobber handling films manufactured by them. In quoting prices for Edison films I do so on my own responsibility as a jobber dealing in this class of goods, and not as a selling agent for the Edison Manufacturing Company.

I have read the affidavit made in this cause by Frank J. Marion, and would say that he is entirely mistaken when he says that I, as an agent of the Edison Manufacturing Company, endeavored to purchase one of complainant's films entitled "Personal" through Mr. Steiner of the firm of Paley & Steiner. I did attempt to purchase such a film through Mr. Steiner, but wished to obtain the film for myself only, for purposes of exhibition, as I am in the habit of purchasing films from the American Mutoscope & Biograph Co.,

45 Edison Manufacturing Company and many other manufacturers.

Mr. Marion is again mistaken when he says that I said to him "We would not have copied your 'Personal' film if we had not been forced to do it."

I recollect the conversation which I had with Mr. Marion on November 9, 1904, at my office, No. 41 East 21st Street, New York City. Mr. Marion called with some films in regard to which I had made some inquiries from the Biograph Company, and after transacting our business as regards these films, Mr. Marion asked me what was being done up in the gallery (meaning the gallery belonging to the Edison Manufacturing Company on the floor above my office). I said I had't the slightest idea of what they were doing.

46 I suppose he knew that I was not connected with the said company, and it did not appear necessary to explain this. He then said it was too bad that the Edison Manufacturing Company had copied their "Personal" film. I said—"Yes, it is too bad from your standpoint,

47 but not from that of an exhibitor." I had not then seen their "Personal" film and in fact have never seen it, so that my remark was not based upon any comparison which I had ever made between complainant's film and the Edison film which complainant avers is a copy thereof. He then replied, as stated in his affidavit,

"This is a rather damaging admission for you to make to me because it will undoubtedly be used against you in the suit we are about to bring against the Edison Co." and I replied, as nearly as I can remember—

48 "Well, facts are facts, and I can't see how anything I have said is damaging."

(Signed) PERCIVAL L. WATERS.  
Sworn to and subscribed }  
before us this 5th day }  
of December, 1904. }

ANNIE B. WALTERS  
(SEAL) Notary Public  
Krupp Co. No. 128  
Cert. Filed N. Y. Co.

**Legal Department Records  
Motion Pictures - Case Files**

***Armat Moving Picture Company v. Edison Manufacturing Company***

This folder contains material pertaining to the suit brought by the Armat Motion Picture Co. against the Edison Manufacturing Co. in the U.S. Circuit Court for the Southern District of New York. The case was initiated in 1902 and later heard in the U.S. Circuit Court of Appeals. It involved the alleged infringement of U.S. Patent 586,953 issued to Thomas Armat and C. Francis Jenkins. The selected items include affidavits by Edison, William Heise, John F. Ott, and others for the defense, along with correspondence between attorneys on both sides of the case regarding possible settlements and cross-licensing agreements.



Legal Box 173

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United States Circuit Court,

Southern District of New York.

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ARMAT MOVING PICTURE COMPANY,

*Complainant,*

vs.

IN EQUITY.

EDISON MANUFACTURING COMPANY,

*Defendant.*

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Defendant's Affidavits in Opposition to Motion  
for Preliminary Injunction.

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RICHARD N. DYER,

*Of Counsel for Defendant.*

**United States Circuit Court.**

SOUTHERN DISTRICT OF NEW YORK.

ARMAT MOVING PICTURE CO.

vs.

EDISON MANUFACTURING CO.

In Equity.

To MESSRS. CHURCH & CHURCH,  
Counsel for Complainant:

Take notice that on the hearing of the motion for preliminary injunction, I shall read and file the affidavits of Thomas A. Edison, William Heise, John F. Ott, Frederick P. Ott and Arthur S. White, copies of which are herewith served upon you; also that I shall use in opposition to said motion the record in the suit in this Court of Thomas A. Edison against American Mutoscope Company *et al*, in equity No. 6,928.

New York, December 10, 1902.

Yours &c.,  
RICHARD N. DYER,  
Of Counsel for Defendant.

2  
T. A. Edison.

5  
UNITED STATES CIRCUIT COURT,  
SOUTHERN DISTRICT OF NEW YORK.

ARMAT MOVING PICTURE COMPANY

6  
VS.

EDISON MANUFACTURING COMPANY.

In Equity.

**Affidavit of Thomas A. Edison.**

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STATE OF NEW JERSEY, } ss.:  
County of Essex, }

THOMAS A. EDISON, being duly sworn, deposes and says as follows:

The living picture business of the defendant is based upon my inventions and patents, and is a continuation of the commercial business which I started in the spring of 1894. Most of the facts regarding my work in the living picture field appear in my testimony given in the suit brought in this Court on my kinetograph patent No. 889,168 against the American Mutoscope Company, and I refer the Court to the record of that case for these facts.

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I have read the patent here in suit granted to Jenkinson and Armat, and I have also read the file-wrapper and contents in the matter of that patent, which appear in the defendant's record in the suit of the present complainant against the American Mutoscope Company in this Court.

The exhibiting machine which I placed upon the market in the spring of 1894 was a direct-view machine, in which the picture film had a continuous

T. A. Edison.

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motion and in which a rotating shutter was employed for cutting off the film from view. Due to the continuous motion of the film, this shutter had a very small opening, which, as I remember it, was approximately one three-hundredths (1/300) of the entire circumference of the shutter. I put this machine on the market to meet an immediate demand, but, as appears by the record in the kinetograph suit, I intended from the very start to utilize my picture films in exhibiting machines which would project the pictures, greatly enlarged, upon a screen. Experiments looking to the production of such a machine were begun at least as early as the year 1890, and were carried on at first by utilizing as an exhibiting machine the kinetographic camera of my patent No. 889,168, the particular machine employed being the 1889 strip kinetograph which was an exhibit in the kinetograph suit and is illustrated by the photographs on pages 493 to 495 of complainant's record in that suit. In this machine the film-feeding mechanism was of such character that the film was at rest for nine-tenths of the time and in motion one-tenth of the time as described in my kinetograph patent before referred to. When used as a camera, the machine was provided with a shutter in the form of a disk having six openings, which were of about the same length as the solid portions of the disk between the openings. Six exposures of the film were made for each revolution of the shutter, and consequently the film was exposed for one half the entire time. In this machine therefore, when provided with such a shutter, the film was in motion one-tenth of the time, was at rest for nine-tenths of the time, and was exposed for one-half of the time, the interval of rest being nine times the interval of motion, and the interval of exposure being five times the interval of motion. This shutter is shown in the photograph on page 493 of complainant's record in the kinetograph suit, and in figure 5 of my kinetograph patent 889,168. In arriving at this form of shutter for the machine

when used as a camera, I conducted a series of experiments with larger and with smaller openings, but finally settled on the shutter opened for practically one-half of the time as being the best for the machine when used as a camera, and when run at the high speed at which I ran it, namely, forty pictures per second. In using the machine as a projecting exhibiting machine, which I did as early as 1890, I naturally made similar changes in the form of the shutter so as to get the best results. We used the machine for projecting purposes without any shutter at all, and also with shutters having a greater opening than one-half. The machine itself, then, made it possible to use a shutter whose opening this whole length of time. We found the results with a shutter better than without a shutter, and we also found that the result was improved by the enlargement of the shutter opening, this improvement being due to the increased light which the larger opening allowed to pass through the film. These early experiments were conducted by Mr. W. K. L. Dickson and other employees of my laboratory under my direction. They resulted in the determination that a projecting exhibiting machine for living pictures should be one in which the picture film should have a period of rest as much longer than the period of motion as practicable, and a shutter period of motion so as to secure as long a period of exposure of each picture as practicable. I regarded this matter of adjusting the shutter opening as being an obvious thing, since the great enlargement of the pictures required in producing life-size effects upon a screen obviously makes necessary the employment of the maximum amount of light, and since my machine kept the film at rest for nine-tenths of the time, it was obvious that the shutter might be opened to allow the light to pass through the film for approximately the same length of time, because the very purpose

of giving the film a longer period of rest than of motion was to permit a long exposure of the film.

The great success of the commercial business which was started on my living picture apparatus in the spring of 1894, delayed me somewhat in bringing out a projecting machine, but I kept somebody almost constantly employed in the work of reducing to a commercial manufacturing form the principles of construction which had been demonstrated as desirable for a projecting machine by the experiments with the 1889 strip kinetograph. This work was transferred from my laboratory to the factory of the defendant Company and was there continued, the mechanic principally employed on the work being one Simpson, who is now dead. A number of projecting machines were built in the course of this work having an intermittent feed for the film with a period of rest greater than the period of motion and with a shutter which was open for more than half the time. I recollect on one occasion witnessing the trial of one of these machines and remarking a deficiency of light in the exhibited picture, whereupon I at once told the mechanic in charge of the work to make a still further enlargement of the shutter opening. This was long before I ever heard of Mr. Armat or the Armat machine. At that time, which was late in the year 1894, my projecting machine was a complete and practical form of apparatus, but it was not entirely satisfactory to me from a manufacturing and commercial standpoint, and this, and also the continued great success of the business on the disc-view machine, deterred me from putting the projecting machine at once upon the market. The circumstances under which my factory built a number of the Armat machines for Messrs. Baff & Gammon, and the later commercial introduction of my own machine, are stated in my testimony in the kinetograph suit and I will not restate them here.

Regarding the patent of Armat and Jenkins here in suit, I am impressed, on reading this patent and comparing it with the original specification and the amend-

ments made during the prosecution in the Patent Office, that Jenkins and Armat started out with the intention of getting a patent on a machine without a shutter. This is what the original specification means to me. In February 1896, six months later, they inserted in the specification the statement that the invention would be embodied in a machine with a shutter, for which there was no warrant in the original specification, and I observe that the wording of the claim was gradually changed until they assume the form of the

claims of the patent in suit. These claims, with the exception of claims 9 and 10 which are clearly on a machine without a shutter, are to me readable only on a machine with a shutter. With a shutter there is an obstruction of the light, which produces a reduction in the total illumination, which does not occur in a machine without a shutter, where the illumination is constant both while the film is moving and while it is

at rest. But in a shutterless machine there is an effect which is very much more objectionable than the shadow produced by the shutter, which is that of an apparent movement of streaks of light across the picture in the direction of the movement of the film. This defect is so great that shutter machines are universally used at the present time, notwithstanding the reduction in the amount of light which the shutter necessarily produces. The Armat and Jenkins invention, as described in the original specification, was

based upon this shutterless machine, which has been found to be impracticable because of introducing greater defects than the defects of the shutter machine which it was designed to overcome. Before February 29th 1896, when the Jenkins and Armat application was changed to include a shutter machine, my projecting machine using a shutter was known to and had been seen by a great many persons.

Apart from my actual work, I regard the invention of the Jenkins and Armat patent in suit, if that patent is to be interpreted to cover a machine provided with a shutter, as anticipated by my kineoscope or exhibit-

ing-machine patent No. 493,426 taken in connection with my kineograph or camera patent No. 589,168. The exhibiting-machine patent states:

"The means for advancing the film and for operating the shutter to expose the pictures may be the same in all particulars as in the apparatus for taking pictures described in my application, Serial No. 403,535, filed August 24, 1891."

As the Court will see by referring to application No. 403,535 in the record in the kineograph suit, that application described and illustrated my camera just as it is described and illustrated in my camera patent, so that the reference in my exhibiting-machine patent to application No. 403,535 can be taken as referring to my camera patent No. 589,168. Indeed in the original application No. 403,534 on which my camera patent issued, both the camera of patent No. 589,168 and the exhibiting machine of patent No. 493,426 were described, and in connection with the latter the same statement was made as to using the camera mechanism in the exhibiting machine as appears in patent No. 493,426. This application can also be found in the record in the kineograph suit.

Interpreting, therefore, the statement quoted from my exhibiting-machine patent No. 493,426 by reference to my camera patent No. 589,168, the following situation appears: The machine of the camera patent is one in which the film is fed with an intermittent movement, the film being held at rest nine-tenths of the time and being in motion one-tenth of the time. The purpose of the long period of rest, my camera patent says, is "in order to give the sensitized film as long an exposure as practicable" (see l. 52, p. 2 of patent No. 589,168). The shutter illustrated is one which gives an exposure for one-half of the time, but this fact is not referred to in the patent, the intention being to make the shutter openings as large, and give "as long an exposure," as the particular conditions of use will permit, and the machine itself having the nine-tenths

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period of rest, part or all of which can be utilized for exposure as experience dictates. With a camera run at a speed giving forty-six pictures per second and under ordinary conditions of light, an exposure of one-half of the time gives good results; for different conditions of speed and light, a different exposure would be preferable. So with an exhibiting machine, the number of pictures per second, the size of the pictures, the degree of enlargement, and the intensity of the light back of the pictures, are all elements which affect the length of exposure. My camera and exhibiting-machine patents leave these things to the skill of the mechanic in this art—the optician and the photographer—as I believe they should be left, the mechanism provided being one which gives a nine-tenths period of rest for the purpose of permitting “as long an exposure as practicable.”

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If, however, in the treatment of this case, my camera and exhibiting-machine patents are to be interpreted as if the camera patent described a half-exposure shutter, and said that that and that alone was the only form of shutter which I contemplated using, then I regard these two patents as disclosing the invention covered by claims 1 to 8 of the Jenkins and Armat patent, if those claims are to be interpreted as including a machine with a shutter, for the following reasons: Claims 1 to 8 of the Jenkins and Armat patent, when applied to a shutter machine, appear to me to cover, in plain language, such a machine only when the interval of pause and illumination of the film exceeds the interval of motion. It is only necessary to find that in my patents the interval of pause and illumination of the film exceeds the interval of motion in order to anticipate these claims, because all the other elements of the claims are obviously in my patents. Even when my camera patent is interpreted as describing only a half-exposure shutter, the interval of pause and illumination which that machine produces is five times the length of the interval of motion of the film, because the film is exposed for one-half

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of the time and is in motion only one-tenth of the time.

If, however, the claims of the Armat and Jenkins patent are to be interpreted as covering a living picture exhibiting machine provided with a shutter, in which the shutter opening is more than one-half, so that the period of illumination will exceed the period of obscuration, then that invention was certainly anticipated by the use which I made of my kinetographic camera as a projecting machine in the year 1890, which use was followed by a continuous line of experiments, resulting in the production of a commercial projecting machine, having all the elements of the Armat and Jenkins patent when thus interpreted, in the year 1894.

THOMAS A. EDISON.

Subscribed and sworn to before me this 10th day of December, 1902.

[SEAL.] RICHARD N. DYER,  
Notary Public.

[SEAL.]

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UNITED STATES CIRCUIT COURT,  
SOUTHERN DISTRICT OF NEW YORK.

ARMAT MOVING PICTURE CO.

vs.

EDISON MANUFACTURING CO.

In Equity.

Affidavit of William Heise.

STATE OF NEW JERSEY, } ss:  
County of Essex.

39. WILLIAM HEISE being duly sworn deposes and says as follows:

I am 55 years of age, reside in West Orange, New Jersey and am employed at the Works of the Edison Manufacturing Company as an Instrument Maker and Experimenter. I started to work in Mr. Edison's Laboratory at West Orange when it was completed, in the latter part of the year 1887, and with the exception of about a year beginning in October, 1898, I have since that time worked continuously either at Mr. Edison's Laboratory or at the Works of the Edison Manufacturing Company.

40. In October, 1890, I began work at Mr. Edison's Laboratory on moving picture apparatus and have been continuously employed on that work since, with the exception of the year before stated, when I was not in Mr. Edison's employ. At the start of my work on moving picture apparatus, I assisted Mr. W. K. L. Dickson in the construction and testing of moving picture apparatus and in the taking of photographs of moving objects. Shortly after the beginning of my

work on this subject, a building was erected especially for the taking of photographs of moving objects, which building was mounted on wheels, so that it could be shifted about to get the proper light, and this building was known as the "Black Maria".

I worked with Mr. Dickson in this building operating the camera for taking pictures and later, when Mr. Dickson left Mr. Edison's employ, I took his place in charge of the taking of photographs of moving objects and I also had charge of the developing and printing plant for developing and printing the photographs. I continued in this position until October, 1898, when I left the employ of the Edison Manufacturing Company and remained out of its employ for about a year.

I recollect the first camera which Mr. Edison had for taking moving pictures, employing a strip of film. This is illustrated by the photographs on pages 422 to 424 of Complainant's Record in the suit of Thomas A. Edison against the American Mutoscope Company and is there called the 1880 strip Kinograph. I, personally, took many pictures with this machine, in fact, my first work on the subject of moving pictures was with this machine.

The shutter with which this machine was provided, had six openings which had approximately the same length as the solid portions of the shutter between the openings, so that the periods of exposure were approximately equal to the periods of non-exposure of the film. The film feeding mechanism of this machine was such that the period of rest of the film was several times the period of motion. The film which this machine used was a narrow film three quarters of an inch wide and was perforated only on one edge. I built other cameras on this same principle which were designed to take a wider film, having perforations on both edges. One of these cameras was run by a motor and was built especially for taking photographs in the "Black Maria". This machine was built as early as 1891. Later and as early as 1894 I built two other cameras similar in construc-

tion which were operated by hand. In all three of these cameras the period of rest was several times the period of motion of the film. When these machines were constructed, they were provided with adjustable shutters so that the amount of opening could be adjusted for the conditions of light under which the pictures were taken.

Soon after I began to work on the subject of moving picture machines in October, 1890, and certainly as early as the latter part of 1890 and early part of 1891, the 1890 strip Kinestograph was used as a projecting, exhibiting machine. I assisted in these experiments, which were carried on in the photograph building in which I was working at the time. In using this machine as a projecting, exhibiting machine, we tried different arrangements of the shutter so as to secure the best effects. Some pictures were projected without any shutter but these were unsatisfactory on account of the streaked appearance of the pictures and the conclusion was reached that a shutter was desirable even though it did result in some reduction of the light. It was at once observed, however, that a larger opening than one half in the shutter was desirable so as to secure a larger amount of light in projecting. The machine having a period of rest of the film several times greater than the period of motion, it was possible to use a shutter which permitted the light to pass through the film approximately the entire time that the film was at rest without giving the streaked appearance which resulted from the use of the machine without a shutter. As the result of these experiments it was well understood by those connected with the work in 1890 and 1891 that a projecting, exhibiting machine should have a period of rest of the film greater than the period of motion and that the shutter should be made with an opening greater than the closure, so that the intervals of time during which the light would pass through the pictures would be greater than the intervals of time during which the light would be cut off from the pictures.

This knowledge was embodied in the use of the 1890 strip Kinestograph as a projecting machine and this machine with a shutter which was opened for more than one-half the time, was used frequently for projecting pictures on a screen at the time stated. The work of improving upon this machine as a projecting, exhibiting machine so as to get it into a commercial and manufacturing form was transferred to the factory of the Edison Manufacturing Company and was there carried on principally by Simpson, who used in his work the features of construction which had been developed by experiments with the 1890 strip Kinestograph. This work was being carried on by Mr. Simpson at least as early as the year 1894 but his work being outside of my department, I was not in a position to follow it closely.

WILLIAM HEISE.

Subscribed and sworn to before me this 9th day of December, 1905.

J. F. RANDOLPH,  
[SEAL.] Notary Public for New Jersey.



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J. F. Ott.

UNITED STATES CIRCUIT COURT,  
SOUTHERN DISTRICT OF NEW YORK.

ARMAT MOVING PICTURE CO.

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vs.

In Equity.

EDISON MANUFACTURING CO.

Affidavit of John F. Ott.

STATE OF NEW JERSEY, } ss.:  
County of Essex,

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JOHN F. OTT being duly sworn deposes and says as follows:

I am 52 years of age, reside in Orange, New Jersey and am employed as Superintendent of the Laboratory of Thomas A. Edison at West Orange. I have worked for Mr. Edison since 1870 and have been Superintendent of the present Laboratory since it was built in the Fall of 1887. As Superintendent of the Laboratory, I have charge of the work of designing and constructing apparatus for Mr. Edison's experiments.

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I remember the first camera which Mr. Edison had in which was employed a strip of film. The mechanical work on this machine was done under my direction. This is the machine known as the "Edison 1889 Strip Kinetograph," which is shown by the photographs on pages 423 to 424 of Complainant's record in the suit of Thomas A. Edison versus the American Mutoscope Company. This machine was constructed in the year 1889. Different shutters were used on this machine, some having larger and some smaller openings than those of

J. F. Ott.

15

the shutter which was finally adopted for the machine when used as a camera but under the conditions under which the machine was designed to work as a camera, the shutter which was finally decided upon was one having openings which would give an exposure for about one-half the time. Cameras built later but before the year 1894 on the same principle, were provided with adjustable shutters which enabled the opening in the shutter to be adjusted for the conditions of light under which the pictures were to be taken. The 1889 Strip Kinetograph had a film-feeding mechanism which produced periods of rest of the film several times longer than the periods of motion. The 1889 Strip Kinetograph was used for experimental work to determine the conditions which would have to be employed in the construction of a projecting, exhibiting machine. This machine was used for projecting moving pictures upon a screen in room 5 of the laboratory in the year 1889, before this moving picture work was transferred to the photograph building in the fall of 1889 and these experiments were continued in the photograph building.

57

In these experiments as in the experiments with the machine when used as a camera, shutters with different size openings were employed. Pictures were also projected upon a screen by this machine without any shutter, but this produced a streaked appearance of the pictures which was objectionable. We found that a shutter could be used on the machine which would give a period of opening approximately as long as the period of rest of the film and this removed the objectionable streaked appearance which was produced when no shutter at all was used.

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As a result of these experiments in the years 1889 and 1890 it became known to those connected with Mr. Edison's work on moving-picture apparatus, including myself, that a projecting exhibiting machine should have a film-feeding mechanism which would produce a period of rest longer than the period of motion

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of the film and a shutter which would permit the light to pass through the picture during practically the entire time that the film was at rest. The work of improving this machine and developing its construction into a commercial and manufacturing form, was transferred to the works of the Edison Manufacturing Company and was carried on there outside of the scope of my superintendence. I did not follow that work closely, but I know that it was going on long before I ever heard anything about the Armat Projecting Machine, and, certainly, as early as the year 1894.

JOHN F. OTT.

Subscribed and sworn to before me this 9th day of }  
December, 1902.

J. F. RANDOLPH,

[SEAL.]

Notary Public for New Jersey.

63

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## UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

ARMAT MOVING PICTURE CO.

vs.

In Equity.

EDISON MANUFACTURING CO.

66

## Affidavit of Frederick P. Ott.

STATE OF NEW JERSEY, } ss.:  
County of Essex,

FREDERICK P. OTT, being duly sworn, deposes and 67  
says as follows:

I am 42 years of age, reside in West Orange, New Jersey, and am an Instrument Maker by occupation. I am employed at the Edison Laboratory in West Orange, on experimental work for Mr. Edison, having been in Mr. Edison's employ continuously for about 17 years. I testified for the complainant in the suit of Thomas A. Edison against American Microscope Company, which suit was on Mr. Edison's patent on the Kinetograph. I did a good deal of work on the experimental machines which Mr. Edison made for both taking and exhibiting moving pictures. I assisted in many experiments with these machines, and often acted as a subject to be photographed. I well remember the construction of the 1889 strip Kinetograph about which I testified in the Kinetograph suit. In that machine the film had a period of rest several times longer than the period of movement. The object was to secure as long an exposure of the film as possible. 68

Experiments were made with shutters having openings of different sizes, both larger and smaller than one half, but under the conditions of use of the machine as a camera, the shutter which gave the best results was one in which the opening was equal to the closure and this shutter was used in later work with the machine as a camera. Later cameras, however, built on the same principle in 1891 and 1892, were provided with adjustable shutters so that the proportion between the opening and closure of the shutter could be adjusted to the conditions of light under which the pictures were taken.

I also remember the use of the 1889 strip Kinetograph as a projecting exhibiting machine in the years 1889 and 1890. The first work of this character was done in room 5, of the Laboratory, before the experiments were transferred to the photograph building in the fall of 1889 and later work was done in the photograph building. In this use of the 1889 strip Kinetograph as a projecting exhibiting machine, changes were made in the shutter so as to increase the amount of light passed through each picture. Some trials were made without any shutter, allowing the light to pass continuously; others were made with shutters having large openings so as to permit the light to pass for approximately the entire period of rest of the film. The results obtained without a shutter were unsatisfactory on account of the streaked appearance of the pictures. This appearance was removed by the use of the shutter which, however, even when having the maximum opening, resulted in reducing the amount of light, but this reduction in the light was less objectionable than the streaked appearance produced when no shutter was used.

It was certainly well understood in 1889 and 1890 by those connected with Mr. Edison's experiments on moving picture apparatus, that a projecting exhibiting machine should have a film feeding mechanism producing a period of rest longer than the period of motion and a shutter which would let the light pass

through each picture for practically the whole period of rest, and this knowledge was repeatedly employed in the use of the 1889 strip Kinetograph as an exhibiting machine in the years 1889 and 1890.

FREDERICK P. ORT.

Subscribed and sworn to before me this 8th day of December, 1902.

J. F. HANFORD,  
[SEAL.] Notary Public for New Jersey.

UNITED STATES CIRCUIT COURT,  
SOUTHERN DISTRICT OF NEW YORK.

ARMAT MOVING PICTURE COMPANY

vs.

EDISON MANUFACTURING COMPANY.

In Equity.

Affidavit of Arthur S. White.

STATE OF NEW YORK, } ss.:  
County of New York, }

ARTHUR S. WHITE, being duly sworn, deposes and says as follows:

I am 44 years of age, reside in the Borough of Manhattan, and am employed in the Kinetoscope and film department of defendant's business, having charge of the photographing exhibition and sales room of the Company, located at No. 41 East First Street in the Borough of Manhattan. In my position I am brought

in contact with exhibitors of and dealers in living picture apparatus and films, and am well acquainted with the conditions existing in the trade.

I recently went to Washington and investigated the business of the complainant Company, and particularly the character of the apparatus it is using. I was in Washington on this mission on November 18, 1902.

I called at complainant's office, No. 527 E Street N. W., and found there Mr. Daniels, the president of the Company, and Mr. Armat, the inventor and vice-president. Both these gentlemen are well known to the complainant Company. I remained in complainant's office about two hours engaged in friendly conversation with these gentlemen. I observed that the complainant's office force consisted, apparently, of one office boy. The office opened into a shop, the shop door being open and most of the interior being visible from the office. In this shop two men were at work. One

of the men was engaged in joining together picture films which he secured from a safe in the office. It is customary to keep those films in a safe. It is also customary to join a number of films together for exhibition purposes, so as to run off one subject after another without delay, and the man who was doing this work was undoubtedly preparing a series of picture films to be exhibited. It appeared by a sign on the

80 window of complainant's office that complainant held Churches and Societies at Short Notice", and Mr. Armat spoke with pride of an exhibition which he had given at a church the night before. The other man in the shop appeared to be repairing a projecting cinematoscope, 1899 model. Another Edison projecting cinematoscope of the same model was in the shop, while the mechanism of an Edison "Universal" projecting machine was on Mr. Armat's desk in the office. These were the only living picture projecting or exhibiting machines which I saw. I saw no camera for taking

living pictures. I never heard of the complainant Company taking pictures or printing films, and I saw no facilities for developing or printing films at their shop. The shop seemed to have a bench and a few tools. It was simply a repair shop and not a factory.

I knew that the complainant was running a projecting machine at a hall in Washington, the Hall of the Ancestors, Pennsylvania Avenue and 16th Street. I went there during the afternoon show and saw about half of the exhibition. The films which were exhibited were Edison films and imported or foreign films. I recognized the subjects, which were all familiar to me. After the exhibition I gave the projecting machine a critical examination. It was an Edison projecting cinematoscope, 1899 model. This exhibition at the Hall of the Ancestors has been run by the complainant for a year or more. It is, so far as I have been able to learn, the only business the complainant does, except to give occasional shows for churches and societies. In its business it uses, apparently, defendant's machines, and films made by defendant and others. The business it does must be trifling in amount, and wholly of an exhibiting and not of a manufacturing order. Complainant has also collected small amounts from travelling

88 living-picture exhibitors when they appeared in Washington to fill an engagement. These engagements are usually for a week, and some timid exhibitors have paid the complainant the twenty-five dollars demanded to avoid the threatened trouble. Others not so easily coerced have refused to pay. The complainant has 84 been engaged in this business of petty extortion for several years last past.

The result of my investigation of complainant's business at Washington confirmed the information I have had from exhibitors and dealers.

Defendant's business consists in the manufacture and sale of picture films and exhibiting machines under Mr. Edison's patents, and to carry on this business necessarily it requires a large plant and an effective organization. The complainant has no such plant or

85 organization as would be required to supply the demand if the defendant was enjoined. So far as I am able to learn, the complainant is making no effort at the present time to meet the demands of the trade, and is not offering living-picture apparatus either for sale or for rent.

I attach hereto, marked Exhibits A and B, copies of commercial reports on the complainant.

86 Subscribed and sworn to before me this 5th day of December, 1902. } ARTHUR S. WHITE.

JNO. ROBT. TAYLOR,  
[SEAL.] Notary Public, Kings County,  
Certificate filed in New York County.

87

## Exhibit A.

## ARMAT MOTION PICTURE CO.

WASHINGTON D. C.

July 5th, 1902, § 627 E. St. N. W., Armat Moving Picture Co., Inquired for.

S. B. Daniel is president, Thos. Armat, Vice-Prest., Chas. M. Campbell, Treas., and W. G. Steward, Secy. These with Frank K. Raymond and Walter H. Asker form the directors.

88 Incorporated under the laws of West Virginia, May 2nd, 1900, authorized capital stock \$1,000,000 represented as full paid and non-assessable. Par value of shares \$20. Of the capital stock about 10% was transferred back to the company and is being quoted at \$12 to \$14.

The company owns and controls the patents of Thos Armat in whose favor a decision was handed down by the patent office Feb. 8th, 1900, giving him a priority on all patents on projected moving pictures. They

also brought suit in the Federal Court in N. Y. State in which the decision has not as yet been handed down and what the outcome will be cannot be arrived at.

This company absorbed the American Kinetoscope Co., with all its interests owning stock for some. It is believed they have some valuable patents, though as long as the matters remain in the courts they are not in a position to push things. It is understood they have invented in patent machinery, etc., about \$25,000 with small accompanying liabilities, and as far as can be learned, payments have been satisfactorily met. They seem to be in good standing and have a fair plant, but the bulk of their assets are in the patent rights, etc., and no one will place a pecuniary estimate on same.

The president is well generally known here. He is a resident of N. Y. City, and Vice-president of the Standard Rice Co., of that city. The Vice-president is the inventor and patentee of the device and has been engaged in the real estate business here for some years; not known to have anything financially but is in very fair personal standing. The Treasurer is a capitalist; he is interested in real estate in this city to some extent and was the principal owner of the American Kinetoscope Co. Steward is employed in the position of office and is one of the inventors of the machine owned by the old American Kinetoscope Co. and is a man in moderate circumstances. Raymond is a life insurance man, in very fair personal repute but of limited means, and Asker is a real estate man in fair circumstances.

89 The company's affairs seem to be carefully managed, stand well at their bank, and thought good for their reasonable concerns.

J. D.

**Exhibit B.**

137-11-20-02-Cor.

**ARMAT MOTION PICTURE COMPANY  
Mfrs.**WASHINGTON, D. C.  
EST E. St., N. W.S. B. Daniel, Pres.  
Thos. Armat, V. Pres.  
Chas. M. Campbell, Treas.  
W. G. Steward, Secy.Directors the above, with T. Cushing Daniel, Frank  
K. Raymond and Walter H. Acker.

They formerly conducted business under the style of  
Armat Moving Picture Co., but the Treasurer stated to  
our reporter this date that they were now operating  
under the style of the Armat Motion Picture Co. He  
further stated they had brought suit against persons  
infringing placing their damage at \$150,000 before  
judge in the Supreme Court of New York State, and  
were waiting for the verdict from him. That they were  
operating in a quiet and conservative manner, renting  
their machines, and collecting the royalties from those  
using them, but that the business of the company  
would not be pushed vigorously, until they learned the  
decision of the court, in their infringement suits. The  
officers of the company were not inclined to give a  
detailed statement at present, as they considered the  
time was not suitable for it. They, however, said they  
were paying cash for their wants, and were not asking  
credit.

On October 10th, 1900, Mr. Armat stated verbally:—  
This company was incorporated under the laws of  
the State of W. Va., May 2nd, 1900, authorized capital  
\$1,000,000, par value \$20 fully paid in, and non-assess-  
able, represented by patents. This company is a con-  
solidation of the N. Y. Photo Projecting Co., and the

American Kinetoscope Co. The assets consist prin-  
cipally of the patents of the two companies, and such  
stock and plant as belonged to the Am. Kinetoscope  
Co. at the time of the consolidation, which I estimated  
at about \$25,000.

Those consulted spoke favorably of the invention  
controlled by this company, and express the opinion  
that its officers are handling the same in a legitimate  
manner, but as its assets consist almost entirely of its  
equity in certain patent rights, no estimate of their  
worth is offered. The President is a resident of New  
York, managing the Standard Rice Co. Armat is the  
inventor of the machine, and Campbell is the ex-  
president of the Am. Kinetoscope Co., which was ab-  
sorbed by the above concern. He is reputed a man of  
means. Steward is said to be an electrical engineer.  
T. C. Daniel is a lawyer by profession. Nothing is  
heard derogatory to the integrity or standing and  
ability of the officers and directors.

EST-34.....D July 2nd, 1902. 99

MELVILLE CHURCH,  
J. B. CHURCH,  
A. S. STEUART.

LAW OFFICES OF  
CHURCH & CHURCH,  
McGILL BUILDING,  
908 G STREET N.W.

LONG DISTANCE TELEPHONE  
Main 2161.

CABLE ADDRESS "CHURCH."  
A. S. C. CODE 2161.

PATENT CAUSES.

WASHINGTON, D. C. May 9, 1905.



Mr. Frank L. Dyer,  
Orange,  
N.J.

Dear Sir:-

Yours of the 8th inst., enclosing copy of Judge Lanning's opinion in copyright suit of American Mutoscope Co. vs. Edison Mfg. Co. was duly received. So far, so good. I doubt very much whether the suit will be further prosecuted. If it is, I believe we can win out on the merits, - before Judge Lanning on non-infringement, and before the Court of Appeals on non-infringement and invalidity of copyright. I notice that the judge leans heavily on the Court of Appeals decision in Edison vs. Lubin. If he were not embarrassed by that decision I believe he would hold with us. We do not deny that a positive of a negative may be copyrighted, where the posing, etc. for the taking of the negative involved authorship; but we do insist that one positive of many separate negatives may not lawfully be copyrighted as a photograph. I am having a copy of the opinion made and will mail the original copy back to you tomorrow.

Sometime ago, I wrote Mr. Gilmore asking him to make an appointment with me and a representative of the Armat Co.,

Dyer--2

in New York City, at an early day, to discuss a plan of action, for mutual benefit, in the moving picture business. Mr. Gilmore's office replied that he was away from home and would not be back until about the first of May, when I would hear from him. Up to the present time, I have not heard from him, and, if he is at home, I wish you would jog his memory about the matter. The Armat Company has taken on some new life and is anxious to press to a hearing its suit against the Edison Mfg. Co. (the one your brother Dick is defending) unless some amicable adjustment can be made. Mr. Gilmore will in no way be concluded by discussing the matter with a representative of the Armat Company and I think it good policy for him to do so, as the outcome may be the saving of a good deal of expense of litigation.

Very truly yours,

EG

A handwritten signature in cursive script, appearing to read "Edwin S. Churchill", with a long horizontal flourish extending to the right.



MELVILLE CHURCH,  
A. B. CHURCH,  
—  
A. B. STEWART,  
—  
PATENT CAUSES.

LAW OFFICES OF  
CHURCH & CHURCH,  
McGILL BUILDING,  
908 G STREET N. W.

LONG DISTANCE TELEPHONE  
MAIN 2146.

CABLE ADDRESS "CHURCH."  
A. B. C. CODE USED.

WASHINGTON, D. C. April 18, 1904.

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.

Dear Sir:—

Mr. Armat has an idea which he has given expression  
to in the enclosed letter, which I pass on to you for what  
it is worth. Perhaps this may be a way out of the liti-  
gation, and perhaps not. I should like to have your  
views.

Yours truly,

EG

*Melville Church*

744437	781532
June 17/03	June 21/05
751786	787358
Feb 9/04	Oct 12/05
759452	784801
May 10/04	March 14/05
764739	787732
July 12/04	Oct 12/05
787389	789768
Oct 12/05	May 16/05
767296	742580
Aug 9/04	Nov 3/03
770762	792548
Dec 27/04	June 27/05
	838290
	Dec 11/06

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279572  
June 19/83

507369  
Oct 24/93

557878  
Apr 7/96

628505  
July 11/99

634042  
Oct 3/99

664135  
Dec 18/00

663943  
Dec 18/00

665983  
Jan 15/01

690084  
Dec 31/01

688559  
Dec 10/01

695162  
Mch 11/02

697567  
Apr 15/02

716313  
Dec 16/02

716312  
Dec 16/02

797241  
Aug 15/05

799575  
Sept 12/05

800602  
Sept 20/05

800297  
Sept 28/05

813587  
Feb 27/06

791567  
June 6/05

824653  
June 26/05

828996  
Aug 14/06

828439  
Aug 14/06

826513  
July 17/06

720883  
Feb 10/03

720984  
Feb 10/03

725299  
Apr 14/03

741989  
Oct 20/03

759141  
May 3/04

725689  
Apr 21/03

[ENCLOSURE]

Armat Motion Picture Company

Owners of Patents Covering all Projecting Machines in use in this Country, and also of the business of the American Kinescope Co., and the N. Y. Photo-Projecting Company, American Patents, 556,093, 623,992, 576,183, 540,749, 588,916, 627,930, and Foreign Patents.

CAPLAIN ADDRESS: ARMAT, WASHINGTON  
A. H. C. AND LAMON CODE CHIEF  
OFFICE: MAIN 52

HUTCHINS BUILDING.

WASHINGTON, D. C.

April 1, 1907.

Mr. Melville Church,  
Mc Gill Bldg.,  
Washington, D.C.

Dear Mr. Church:-

The moving picture business has reached a point where I believe large royalties could be collected under our patent, if the Edison Company would join, or rather acquiesce in the matter.

The situation is this:-There have recently sprung up in the country a larger number of Five Cent Theatres. Some of these places are elaborately and expensively fitted up. They are making a profit of from sixty to five hundred per week. I believe there are a thousand or more of them in this country today, and they are rapidly increasing in number.

They each have a "local habitation and a name", and are therefore very come-at-able. They are a very different proposition from the moving picture exhibitor of a year ago.

I believe we could collect a royalty of an average of five dollars per week from each of these places without hurting them. This would amount to \$5000 per week.

If an arrangement could be made with the Edison Company, pending the final decision in our case, by which this could be accomplished, we would be willing that they should get a large slice

[ENCLOSURE]

Armat Motion Picture Company

Owners of Patents Covering all Projecting Machines in use in  
this Country, and also of the business of the American Kinetograph  
Company, and the N. Y. Photo-Printing Company, American  
Patents, 585,953, 673,092, 578,185, 580,749, 588,  
916, 627,235, and Foreign Patents.

CARE ADDRESS: ARMAT, WASHINGTON  
A. H. C. AND LUMBER CONC. OFF.  
TELEPHONE: MAIN 12

HITCHINS BUILDING.

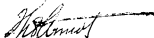
WASHINGTON, D. C.

of the money collected. This would be so much clear profit to them, as it would not affect their sale of machines or films in the least.

If there are any special parties that they do not want disturbed, this could of course be arranged. There must be a large number of these people who have been more or less unfair to the Edison Company, and this scheme would present a good opportunity of getting back at them. In fact I think it might be so arranged as to throw additional business to the Edison Company in the sale of machines and films, by handicapping Powers and Lubin, and other makers of machines.

I will be very glad if you will see what can be done in this direction as soon as possible.

Yours very truly,



*Armat*

April 9, 1907.

Melville Church, Esq.,  
908 - G Street,  
Washington, D.C.

Dear Mr. Church:-

Your favor of the 6th inst. is received enclosing the letter from Mr. Armat. Perhaps I am more dense than usual this morning, but altho I have read Mr. Armat's letter several times, I must say that I cannot see what he is driving at. If he will take up the matter again and make it a little clearer I will be very glad to put it up to my clients.

Yours very truly,

FLD/ARK.

MELVILLE CHURCH,  
J. B. CHURCH,  
ATTORNEY  
A. B. STEUART.

PATENT CAUSER

LAW OFFICES OF  
CHURCH & CHURCH,  
MCGILL BUILDING,  
908 G STREET N. W.

LONG DISTANCE TELEPHONE  
MAIN 2144.

CABLE ADDRESS "CHURCH."  
A. B. C. CODE USED.

WASHINGTON, D. C.

May 7, 1907.

*Armat*  
Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N.J.

Dear Sir:-

Yours of the 4th inst. received. I enclose here-  
with a copy of a letter from Mr. Thomas Armat, together with  
a copy of his patent 578,185, referred to therein. This  
letter and patent should be taken into consideration in  
arranging a plan of cooperation.

Yours truly,

EG

*Melville Church*

[ENCLOSURE]

COPY

May 4, 1907.

Mr. Melville Church,  
No 611 Eldg.,  
Washington, D.C.

My Dear Mr. Church:

It occurs to me that my patent 578,185, a copy of which I am sending you by same mail, could be used to advantage in connection with the proposed Edison cooperation.

Every machine now being made in this country employs the small drum and the intermittent gear, covered by the claims of the patent.

There are four principal manufacturers of these machines, the Edison Company, S. Lubin, N. Powers and a Chicago concern, called the Optograph Co.

The Edison Company first brought out a machine having an eccentric beater for intermittently moving the film. This machine was an exact duplicate of the model I furnished Raff & Gammon. Lubin duplicated this machine about six months after its appearance. Edison then brought out his present machine having the intermittent gear of the above mentioned patent 578,185. This was about six months after my application for this patent. About a year after this Lubin began making machines like the Edison machine just referred to, and about two years or more after Lubin, Powers started in to make these machines and all of them have continued to make them up to this time and I believe that 98% of the machines in use in this country today are machines employing the intermittent movement of patent 578,175.

I believe this patent to be absolutely good against all these makers, with the possible exception of Edison, inasmuch as Edison brought out a machine before the issue of this patent and it might be that he got it up entirely independent of anything that I did, but I know the others did not. Lubin was the first one after Edison to make these machines and it happens that some time after the issue of patent 578,175 I was in his store, and not knowing who I was he took me down to his shop to show me the new machine that he was then getting up. This machine employed this movement.

It therefore seems to me that this patent could be advantageously used in connection with the patent we have been suing under, if the proposed Edison deal is consummated.

Yours very truly,  
THOMAS ARMAT.

MELVILLE CHURCH,  
J. M. CHURCH,  
—  
A. B. STEGANT.

PATENT CAUSER.

LAW OFFICES OF  
**CHURCH & CHURCH,**  
McGILL BUILDING,  
808 G STREET N. W.

LONG DISTANCE TELEPHONE  
MAIN 2148.

CABLE ADDRESS "CHURCH."  
A. B. C. CODE 1908.

WASHINGTON, D. C.

May 25, 1907.

*Armat*  
Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N.J.

Dear Sir:-

I send herewith a copy of the outline of agreement which the Armat Company is willing to make with the Edison Company, in regard to the moving picture exhibiting machine patents. I wish you would take this matter up with your people and dispose of it, one way or the other, definitely. If your people conclude to reject the proposed agreement, or one like it, I would like to have you advise me to that effect, and then have you proceed with the completion of your proofs, in order that we, in turn, may complete ours and get ready for the hearing. The Armat Company feel that there has been a long and unprofitable delay in the suit and that the latter ought to be brought to a conclusion.

Yours truly,

EG

*Wm. H. Church*



[ENCLOSURE]

COPY.

The Armat Company to proceed against all Five Cent Theatres, and similar places, and to collect royalties from same, the Edison Company to receive 25% of the gross amount of such royalties (or 50% of the net amount). Such places as may now be using Edison Machines, to have their royalties remitted, if the Edison Company so desires. It is suggested as equitable that in case the division is on the basis of gross receipts, the Armat Company is to be allowed 10% of gross receipts for legal expenses before the division of 75% and 25% occurs.

If the Edison Company objects to suits against owners of Edison machines as above provided, the Armat Company and the Edison Company to agree as to what places are to be proceeded against.

The Edison Company to agree to lease machines in the future, instead of selling them, or to sell them in such a way that they can control the manner of their use, and to provide in case of Nickelodeons, and similar places, for the payment of royalties. It is suggested that the Edison Company could lease the machines for personal use for 99 years, for a cash consideration equal to their present selling price. The price so received to entirely to the Edison Company, but the Edison Company is to provide that where these machines are used in Nickelodeons and similar places, royalties are to be paid, and these royalties to go to the Armat Company and the Edison Company as above provided.

1. The first thing I noticed when I stepped out  
 2. of the car was the heat. It was a relief, but it  
 3. was also a warning. The sun was beating down on  
 4. the pavement, and the air was thick with the smell  
 5. of asphalt and exhaust. I took a deep breath,

[ENCLOSURE]

In case by the above mentioned agreement, the Edison Company should receive, per year, from the lease of machines, more than they have received in the past year from the sale of machines, the Armat Company to participate, in a proportion agreed upon, in the profits of such increase.

NATIONAL PHONOGRAPH COMPANY

*Armat*

May 27, 1907.

Melville Church, Esq.,  
Washington, D.C.

Dear Mr. Church:-

Yours of the 25th inst. with enclosed proposition from Mr. Armat finds me just leaving the office and I expect to be away all of the week. Mr. Armat's proposition cannot be accepted, because it involves the payment of royalties on Edison machines. I am quite sure that my clients would go no further than to agree to an arrangement under which they will take a license under the Armat patent, giving to Mr. Armat such moral assistance as they could in connection with his crusade against other infringing machines. Under the circumstances, therefore, I suppose there is nothing to be done except to go ahead with the suit.

Yours very truly,

FID/ARK.

TELEPHONES 7882 CORTLANDT  
7884

44 2 ADDRESS, REGARLO, NEW YORK

## NICHOLAS POWER COMPANY

MANUFACTURERS OF

### MOTION PICTURE APPARATUS

(Patents of Nicholas Power)

115-117 NASSAU STREET

NEW YORK Nov. 9, 1907.

POWER'S CAMERAGRAPH  
FIREPROOF MAGAZINES  
AUTOMATIC TAKE-UP DEVICE  
AUTOMATIC FILM SHIELD  
AND ACCESSORIES

FACTORY: 14-25 JACOB STREET

Mr. H. H. Dyke,  
Assistant Counsel,  
Edison Laboratory,  
Orange, N. J.

My Dear Mr. Dyke:

Your letter inquiring about disclosure of a  
star-wheel device which would probably anticipate the Armat  
patent #578186 just received.

The data which I referred to in speaking of this  
matter was an early catalog issued by the Boston Gear Works  
of Boston, Mass. I have not seen the catalog myself but  
the Proprietor of the Boston Gear Works mentioned it to me  
in conversation last week. I think a communication addressed  
to the Boston Gear Works, and saying that you had been re-  
ferred to them by Mr. Morton of the Nicholas Power Company,  
would probably elicit the desired information. I presume  
it is too late to obtain a copy of the catalog, but I think  
that very likely Mr. Burgess would have photos of the pertinent  
parts of the catalog made for you.

We should be very glad to co-operate with you in  
fighting any suits based on the Armat patents to the extent  
of procuring such evidence as we may be able to locate, and  
will also be glad to co-operate with you in planning defenses.

Incidentally, one of our customers has just been  
threatened with a suit under the Armat patents in Washington,  
and in the letter threatening suit it is stated that Armat  
patent #586953 was sustained in suit against the American  
Kitescope & Biograph Co., and that a case on the same patent  
against the Edison Company was decided by Judge Jacobson in  
the Southern District of New York in favor of the patent,  
and that this case is now before the court of appeals and will  
probably be decided this Fall.

If it is not too much trouble, I wish you would  
kindly let me know whether these allegations are correct. My  
own impression has been that no decision had been reached in

the suit against the Edison Company and that, in fact, the proofs had not been completed.

Regarding the proposition made by me when I called to see you and Mr. Dyer last week, it seems to me that it is highly desirable for the principal concerns interested in moving pictures in this country to get together as soon as possible and endeavor to formulate some satisfactory plan of controlling the industry. The advent of new and irresponsible concerns every few days convinces me that if something is not done along the line of a consolidation the profits of the business will be greatly diminished in the near future.

You can count on me to acquiesce in any arrangement that promises good results, and I shall be glad to go out to Orange at any time, when other engagements will permit, to go over the situation as fully as may be desired.

Another matter upon which you can give me some information that I will appreciate is the Edison patent on the perforated film. As I recall the conversation with Mr. Dyer last week, he stated that suits had been brought on this patent but no one had ever made any defense. If this is correct, why is the use of the perforated film permitted on all moving picture machines today? Are the film makers operating under license or in defiance of the patent?

I have heard of some other evidence which may be of significance in the suit of Armat patent #579185, and will follow it up on Monday. If it is of any importance I will advise you promptly.

Yours very truly,

NICHOLAS POWER COMPANY.

*Nicholas Power*  
*Baxton*

Nov. 12, 1907

Baxter Morton, Esq.,

115 Nassau St., New York, N.Y.

Dear Mr. Morton:-

I have written the Boston Gear Works along the lines which you suggested in your letter of November 9, and hope to obtain some important information from that source. We have their catalogue for 1903 and find on page 9 thereof a disclosure of the identical star wheel device used by Armat, and if they issued a catalogue early enough to sufficiently antedate the patent it may be very valuable in the defense of that suit. I thank you very much for your kind suggestion regarding the Boston Gear Works and your further statement that you have heard of some other evidence which may be of significance in the suit on the Armat patent, and that if it turns out to be of any importance you will let us know. I hope your investigation will turn up something.

Do you know of any books on the moving picture art? I should like to make a collection so far as possible of the available literature on this subject, and would greatly appreciate any information that would assist me in getting together such a collection. Among other things, I would

N.M. Esq.,--2-- Nov.12, 1907

like to get together as many catalogues as possible, and I would thank you very much for a copy of your catalogue, and, if it is not too much trouble, of any other stray catalogues of which you may happen to have duplicate copies.

The threatening letter to which you refer, respecting the Armat patents, appears to have been a little misleading. As a matter of fact, in the suit against the Edison Company a preliminary injunction was originally granted but on appeal that injunction was dissolved, and since that time, as you suggest, the taking of proofs for final hearing has been carried on in a fashion which, on the part of the complainant, has been somewhat desultory, and the taking of such proofs has not yet been completed.

My recollection is not precisely clear on the question of the Armat suit against the Mutoscope Company, so that I am not able to hazard a statement as to what was the outcome of that case, but of course you will have no trouble in looking it up in the reports. The suits brought on the Armat patent, so far as I know, have all been brought by the Armat Moving Picture Company.

Mr. Dyer has talked with Mr. Gilmore regarding the propositions which you have made and he approves of your suggestions regarding the Schneider interference, so you can go ahead with the preparation of the necessary papers.

As to the situation regarding the business competition

he has suggested that it would be well for you to take this matter up and throw it out with William Pelzer, Esq., who is at the New York Office of the Company, No.10 Fifth Ave. Mr. Pelzer is thoroughly conversant with the business situation and between you and him the matter, it seems to me, should be worked out in such a way as to make the business most successful for all concerned. The question respecting the Edison film patent can also be best answered by Mr. Pelzer who thoroughly understands the situation with regard to that patent.

Very truly yours,

RHP/MJL

Assistant Counsel.



# Legal Department.

Thomas A. Edison's  
National Phonograph Co.  
Edison Manufacturing Co.  
Edison Manufacturing Co.  
Edison Storage Battery Co.

*Armat*

*Gilmore*

Gilmore's idea are to colonial  
he is impractical but I do not  
think any good would come to us  
Wm. E. Gilmore, Esq.,  
beginning any arrangement with him  
Orange, N.J.

Dear Sir:-

*2 cases*

Here are two letters, one from my brother  
Dick, and the other from the attorney for the Powers  
Company, both relating to the same question, namely,  
making some arrangement with Armat so as to control  
the Projecting Machine business. It seems to me  
that this is a good scheme if it can be worked out  
effectively. You know, I have already seen Armat  
about the same matter and he then had a very prac-  
tical suggestion. Possibly some effective plan might  
be worked out.

I have not answered or acknowledged either  
letter, but will do so after you have read them.

Yours very truly,

*Frank L. Dyer*  
General Counsel

WLD/ARK.  
Enc.

Telephone 207 Orange  
Cable Address Edison Orange

Frank L. Dyer, General Counsel  
*File*



Jan. 31, 1908

*Read this note  
knowing that he has  
everything of great  
value to the film  
business*

[ENCLOSURE]

*P. S. Spencer expressed no views on Amet  
August 1 (and this now) and only said  
I should speak to* CABLE ADDRESS NEW WILLARD



**THE NEW WILLARD,**

PENNSYLVANIA AVENUE, FOURTEENTH & F STREETS

WASHINGTON, D.C.



Dear Frank I have been x-erasing Amet  
his afternoon and making good progress.

Amet anticipated an investigation into  
-trends to make as broken the Boston Star  
works made the mutilated gears of his first  
machine like that in suit. He wrote the B.  
to H. and he reply showed that the order was  
entered July 21 1895 (the very day of the complete  
Lammie publication) and the gears were shipped  
Aug 17. I'm well recalled that Amet testified  
that this machine was completed in July &  
exhibited during the latter part of July and  
first part of August. He now says that this  
machine was completed August 19, because  
they had everything ready and it only needed  
an hour or two work to add the mutilated  
gears.

I now believe that the July 31  
publication will beat the patent suit of J. H.  
because the July 1 publication is clearly ahead of J. H.  
As we were closing (and this is the particular  
purpose of this letter) Amet talked to me  
about compromise. It seems a very lawyer-  
motion of course - can save him cash

[ENCLOSURE]

Saturday representing the Powers machine. The lawyer said that they had information of others who are preparing to go into the mfr of exhibiting machines and are being special tools made for cheap mfr and that soon the market will be flooded with machines at a low price. Powers wants to pay a <sup>to willing to bring his mch</sup> royalty and put out mchs licensed for use only with American films as as to shut out foreign films. He wants the Justice & Annet patent sustained as a protection against new comers into the field of mfr of exhibiting mchs. Annet thinks a compromise should be made. He thinks a compromise might include a company which would take all the Edison out put and guarantee sales at least for 50% more mchs than E. now puts out. Also restricting all mchs for hire only with American films so as to shut out foreign films. This Co would also <sup>all</sup> take mchs of Powers\* and sell under similar restriction.

I told Annet I would mention the matter to you and in order to release my mind off it I will do so -

Yours  
Ed

\*Annet's idea is to take the have a company take the out put of Powers and Edison mchs & sell them under restrictions which will exclude foreign films as that will be protected against foreign films (this as an inducement to Edison). All old mchs (which will soon wear out) and something will be to be taken from

[ENCLOSURE]

BAXTER MORTON  
COUNSELOR AT LAW  
42 BROADWAY  
NEW YORK  
117 NASSAU ST.

Jan. 30, 1908

Mr. Herbert H. Dyke,  
Edison Laboratory,  
Orange, N. J.



My Dear Mr. Dyke:-

Your two letters of yesterday just received and I wish to thank you for your offer to place at my disposal the catalog of the Weston Gear Works, which you obtained some time ago.

I do not know as yet what we shall do in the Armat suit. I am inclined to think that it would be a good thing for the Nicholas Power Co. and the Edison Company to join in the attempt to sustain the Armat patents rather than to have them invalidated. I have told Armat that I thought it would be a good thing if some understanding might be reached with that end in view, and he seemed to think well of the idea after I had pointed out its commercial significance, and nothing further will be done in the suit against us until we have thrashed this matter out.

I am devoting what time I can to a consideration of the scope and significance of the Armat patent, and would like to arrange as soon as possible for a conference with your people to determine what is advisable under the circumstances. Can you arrange a meeting for me with the proper parties connected

[ENCLOSURE]

with your concern sometime next week to go into this matter? I suppose you would want to have both the legal and commercial ends of your concern represented, as both of those phases of the matter will have to be carefully considered.

Yours very truly,

*Baxter Morton*

0.

**Legal Department Records  
Motion Pictures - Case Files**

***Thomas A. Edison v. Sigmund Lubin***

This folder contains material pertaining to the suit brought by Edison against Sigmund Lubin in the U.S. Circuit Court for the Eastern District of Pennsylvania. The case was initiated in June 1902 and involved the alleged infringement of Edison's copyright on the film, *Christening and Launching Kaiser Wilhelm's Yacht Meteor*. The selected items include the bill of complaint and brief for complainant, along with correspondence regarding the case and its subsequent appeal to the U.S. Circuit Court of Appeals and then to the U.S. Supreme Court. Also selected is the decision of the appellate court, which reversed the decision of the lower court and established that motion pictures could be protected in the same way as still photographs under the Copyright Act of 1865. The items not selected include pleadings and affidavits; correspondence among attorneys and members of Edison's staff; still photographs of the Edison film; and material prepared for later copyright litigation over Edison films such as *Jack and the Bean Stalk* and *The Great Train Robbery*.

THOMAS A. EDISON, Pres.

W. C. GILMORE, Vice Pres.

J. F. RANDOLPH, Secy & Treas.

CABLE "KURUDAN" NEW YORK.

SALESROOMS:  
150 FIFTH AVENUE, CORNER COFFEE HOUSE,  
NEW YORK  
83 CHAMBERS STREET.



Type "Q" Cell,  
CAPACITY 150 AMPERE HOURS

**EDISON MANUFACTURING CO.**  
EDISON PRIMARY BATTERY  
FAN MOTOR OUTFITS  
Edison Projecting  
Mikroscope Films



Orange, N. J., June 10th, 1904

Howard W. Hayes Esq.,

Newark, N. J.,

JUN 11 1904

Dear Sir:-

We enclose you herewith corrected copy of advertisement to appear in the New York Clipper. Mr. Edison wished some changes made in the draft which you gave our Mr. Shattuck. All films manufactured by us are not copyrighted, and you will notice we have changed the ad. to read accordingly. You will also note that we have omitted the wording "Who is the next man to be sued, etc." We think this would be liable to invite the public's ill will.

Yours very truly,

EDISON MANUFACTURING COMPANY

*Joseph W. Bates*  
Manager Film Dept.

JHW/

JNA.

[ENCLOSURE]

THOMAS A. EDISON, Pres.

W. E. GILMORE, Vice Pres.

J. F. RANDOLPH, Secy. & Treas.

CABLE "KURILAN" NEW YORK.

SALES ROOMS:  
137 FIFTH AVENUE CORNER 30th STREET  
NEW YORK  
83 CHAMBERS STREET.



Type "Q" Cell,  
CAPACITY 150 AMPERE HOURS

EDISON MANUFACTURING COMPANY

WARNING

To FILM MAKERS

To The PUBLIC

All original moving picture films manufactured by the Edison Manufacturing Company have been copyrighted by Thomas A. Edison in the Office of the Librarian of Congress, Washington, D.C. All persons manufacturing, selling or exhibiting spurious copies of these films will be prosecuted. Suit has been brought in the United States Circuit Court for the Eastern District of Pennsylvania against S. Lubin of Philadelphia for infringement of our copyrighted film "Christening and Launching Kaiser Wilhelm's Yacht 'Meteor'". We beg specially to advise the public that Lubin has been making inferior duplicate prints of this film, advertising it in his catalogues, selling it to the public, and thereby leading them to believe that they were buying an original picture, while we have contracts to show that we had the exclusive concession from the Townsend & Downey Shipbuilding Co. Shooters Island, N. Y. for making Motion pictures of these ceremonies. We shall prosecute vigorously all infringement of our copyrighted films.



THOMAS A. EDISON, PRES.

W. E. GILMORE, Vice Pres.

J. F. RANDOLPH, Secy & Treas.

CABLE "KURJAN" NEW YORK.

SALESROOMS:  
125 Fifth Avenue corner 20th Street  
NEW YORK.  
83 CHAMBERS STREET.



Type "Q" Cell.  
CAPACITY 150 AMPERE HOURS



Orange, N. J., June 27, 1902.



Howard W. Hayes, Esq.,

Newark, N. J.

Dear Sir:

In re the Lubin case

I talked this over fully with Messrs. Edison and White and advised Mr. Edison that it is your opinion that the case should be taken to the Court of Appeals, and he agrees with you, so you can proceed with this.

We shall continue to copyright such films as we think it necessary to copyright. It cannot cost us a great deal of money, except for the stock that is used, as the fee is very small. However, this is a matter that I have yet to take up and discuss with Mr. White further and I will write you about it, so that the next time I see you we can discuss it again.

Yours very truly

*W. E. Gilmore*

Vice-Pres. & Gen. Mgr.

WEG/IWW

United States Circuit Court,  
Eastern District of Pennsylvania.

Thomas A. Edison : In Equity  
vs. : April Sessions, 1902.  
Siegmund Lubin. : No. 55.

Agreed Statement of Facts.

It is agreed between counsel that this case shall be heard on bill, answer and replication, and that instead of taking proofs in the ordinary way the following facts are admitted to be true in the same manner as if they were fully proven by depositions.

Thomas A. Edison the complainant was on the first day of February 1902, and ever since has been a citizen and resident of the State of New Jersey.

Jacob Blair Smith was on the first day of February 1902, and ever since has been a citizen and resident of the State of New Jersey.

On the 25th day of February 1902, a yacht called the Meteor, which had been built in the State of New York in the United States for Kaiser Wilhelm the Emperor of Germany, was launched at a place called Shooter's Island in the State of New York. The said Jacob Blair Smith was on that day in the employment of the said Thomas A. Edison and was employed by the said Thomas A. Edison to photograph the launching of the said yacht by means of a camera adapted for taking photographs <sup>views</sup> in rapid succession from a single point of view, adapted for representing successive positions of a moving object or objects. The said Jacob Blair Smith placed his camera prior to taking any of said photographs <sup>views</sup> and after be-

ing placed the position of the camera was not changed except that it was turned on its support by said Smith so as to keep the moving yacht always in focus. The sensitive film was placed before the lens by mechanism operated by hand by said Smith who in that way regulated the number of exposures per second. In all other respects the operation of the camera was automatic, portraying whatever passed before it. Prince Henry, the brother of Kaiser Wilhelm, and the Hon. Theodore Roosevelt, the president of the United States, and his daughter, Miss Roosevelt, were present at the said launching, and photographic views of them were taken, together with the boat during the said launching. The result obtained consisted of about 4500 successive photographic views each view being made by a complete and independent photographic exposure, all taken from the same point of view, on a strip of sensitized celluloid film about 500 feet long and about an inch and a quarter in width. These views or photographs were taken in rapid succession and show the said Prince Henry and the president of the United States and his daughter on a platform in front of the yacht, and show Miss Roosevelt in the act of christening the yacht by breaking a bottle containing some liquid, and then show the yacht moving down the ways into the water, and different views showing different subjects in many cases. Immediately after this succession of views on the said film were taken, the negatives were developed by employees of the said Thomas A. Edison and positives were printed from said negatives. The purpose of printing these positives was to sell them to the public, who by means of an appliance similar to a magic lantern, could throw these views on a screen in rapid succession so as to give the effect of actual motion, and show the said launching as it actual-

ly took place.

Two of these positive films together with the title "Christening and Launching Kaiser Wilhelm's Yacht Meteor" <sup>and the negative right for</sup> were deposited by an employee of the plaintiff in the Post Office at Orange, N.J. on the 26th day of February 1902 in an envelope with postage prepaid, directed to the Librarian of Congress at Washington, D.C. and were received, recorded and filed by the Librarian of Congress at Washington, D. C. on or before the 28th day of February, 1902.

The said title was recorded and filed just before the receipt and filing of the films. The said photograph or photographs comprising the successive views were not published until after the 28th day of February, 1902. Thereafter the said Thomas A. Edison caused said photograph or photographs consisting of the said succession of views to be sold to the public in strips of either 100, 200 or 300 feet in length. At the end of each strip that was sold, loaned, given away, or published <sup>by</sup> him was printed or visibly inscribed on a celluloid film, pasted on one end of the celluloid film upon which the said photographs <sup>views</sup> were printed, the words "Copyrighted 1902, by Thomas A. Edison". This notice was, however, placed only at the end of each strip as shown by exhibit 1, and was not printed or inscribed on each view.

The defendant, Sigmund Lubin, thereafter purchased a strip of said positive film about 100 feet long containing about 1500 successive views, which said strip at the time he purchased it <sup>did not have on its end or elsewhere</sup> the words "Copyrighted, 1902 by Thomas A. Edison" or any similar notice of copyright nor was the defendant aware of the existence of said copyright claim. At-

ter having purchased the said positive film the defendant printed from it a negative film on a sensitized collaloid strip and from said negative film printed positive films on sensitized strips and sold one of said positive films so printed by him, 50 feet in length, to one James N. Maulty, at Philadelphia, on the 12th day of April 1902, and sent it to him by express, at Newark, New Jersey, on April 15, 1902. He also sold to the same James N. Maulty, at Philadelphia, on the 29th day of May 1902, a strip of said positive film so printed by him, 50 feet in length which, together with the other piece he had sold to the said Maulty, made up a strip of 100 feet in length which he, the said Siegmund Lubin, had printed from the negative film made by him as above stated.

The following exhibits presented by the complainant on the motion for preliminary injunction, heretofore made in this case, are admitted in evidence. They are as follows:-

Exhibit 1. A positive film 100 feet long, containing about 1500 views, which is identical with the film sold by Mr. Raison as above set forth and is identical with the film purchased by Siegmund Lubin, from which a negative film was made by him as above described. It is also identical with part of the photograph or succession of photographs copyrighted by Mr. Raison as above set forth.

Exhibits 2 and 3. The said two 50 feet films purchased by said Maulty from said Siegmund Lubin.

Exhibit 4. Certificate of the Librarian of Congress of the deposit in the Library of Congress of the title and photograph "Christening and Launching Kaiser Wilhelm's Yacht Meteor." The

same being schedule one annexed to complainant's bill.

Exhibit 5. Proceedings of the issue of copyright to the said Thomas A. Edison of the said photograph, the same being set out at length in paragraph 4 of complainant's bill.

*Thomas A. Hayes*

Counsel for Thomas A. Edison

*Charles M. Butler*

*Gustavus S. Sikes*

Counsel for Sigmund Lubin.

UNITED STATES CIRCUIT COURT.  
EASTERN DISTRICT OF PENNSYLVANIA.

Thomas A. Edison, :  
Complainant :  
vs : *In Equity*  
Sigmund Lubin, :  
Defendant :

TO THE HONORABLE, THE JUDGES OF THE UNITED STATES CIR-  
CUIT COURT, FOR THE EASTERN DISTRICT OF PENNSYLVANIA.

Thomas A. Edison, a citizen and resident of the  
United States, and of the Township of West Orange, in the  
County of Essex, in the State of New Jersey, brings this his  
bill of complaint against Sigmund Lubin, a resident of the  
City of Philadelphia, in the State of Pennsylvania, and in  
the Eastern District of Pennsylvania, and thereupon your  
orator complains and says:

1. That your orator now is and for more than  
seven years last past has been engaged in the business of  
making and selling photographs representing actual motion,  
and has carried on said business under the name of  
Edison Manufacturing Company.

2. That on or about the twenty fifth day of  
February, nineteen hundred and two, your orator became the  
sole proprietor of a certain photograph entitled

"Christening and Launching Kaiser Wilhelm's Yacht Meteor"  
which said photograph was made by <sup>East Man Smith, a photographer</sup> ~~persons~~ employed by your  
orator for that purpose, upon a certain negative film  
which said film was afterwards developed and the photo-  
graph taken thereon was printed upon certain films called  
positive films, and that your orator became the exclusive  
owner and proprietor of the said photograph on or about  
the said twenty fifth day of February, nineteen hundred and  
two, and before the same had been published.

3. That on or about the twenty eighth day of  
February, nineteen hundred and two such proceedings were  
duly had by your orator that your orator did on said day  
secure a copyright of said photograph pursuant to the  
Act of Congress for securing copyrights, which took  
effect July 8, 1870, and the amendments thereto, and the  
said copyright was duly issued to your orator under the hand  
and seal of the Librarian of Congress, and the original  
record of said copyright is in the Library of Congress.

4. That the following is a true copy of such  
proceedings.

"Library of Congress,  
Washington,

Copyright Department:

Dear Sir:-

Copyright entry had been duly made under date  
of Feb. 28, 1902, in accordance with your application of  
Feb. 26, 1902. You are at liberty upon receiving this  
notice to print your article with the Statutory notice of  
copyright. Should a certificate of copyright be desired  
please remit for each entry the legal fee of 50¢.

The law required that two copies of the best edition  
of each article copyrighted shall be sent to the Library of



Congress. If you have not already done so when your work is printed or otherwise produced, send two copies addressed Librarian of Congress, Copyright Department, Washington, D. C. in compliance with the law.

Respectfully, The Librarian of Congress,  
by Thorwald Solberg,

Register of Copyrights."

and your orator has annexed to this bill, and makes part hereof a certificate of copyright of the said photograph, marked schedule 1.

5. That two copies of the best edition of said article were sent to the Library of Congress by your orator on the twenty sixth day of February, nineteen hundred and two, and were received and filed by the Librarian of Congress at Washington, D. C., on or before the twenty eighth day of February, nineteen hundred and two, and before the publication of said photograph.

6. That your orator gave due notice of said copyright by printing it on every copy of said photograph published, to wit, by inscribing upon some visible portion of every said copy, of the substance on which the same was mounted or printed, the following, "copyrighted 1902, by Thomas A. Edison," and by inserting the following words, to wit, copyrighted 1902, by Thomas A. Edison.

7. That your orator begs leave to make said original copyright and the copy thereof, a part of this his bill of complaint, and to refer to said original record:

8. That your orator is, and ever since the date of February, twenty fifth, nineteen hundred and two has been the proprietor of said photograph, and has offered for sale

and sold the same with the said notice of such copy-right printed on each photograph so sold by him as hereinabove set forth.

9. That said photograph was taken by means of a camera invented by your orator, by means of which successive views of the same object are taken from the same point of view, so that when the said views are successively thrown upon a screen by means of an appliance similar to a magic lantern, the appearance of actual motion is given to the observer, and that the said successive views were taken on one negative consisting of a strip of film about three hundred feet long, and that from said negative, <sup>film</sup> Positive films of varying lengths have been printed by your orator in the course of his regular business, and sold to the public for the purpose of having them reproduced as above described to give the effect to the observer of actual motion, and that each view is not sold by itself, but are sold in numbers together, being printed on one strip for the foregoing purpose and constituting one photograph.

10. That the object photographed <sup>by</sup> your orator as above set forth was the launching of the Yacht Meteor which was built in the United States for Kaiser Wilhelm the Emperor of Germany; that the said launching took place at Shooter's Island in the State of New York, and was a matter of great interest to all citizens of the United States and all other countries. That the brother of the said Kaiser Wilhelm, Prince Henry, and also the President of the United States and his daughter, were present at said launching, and stood on a platform at the bow of the boat, which added greatly to the interest taken by the public in the launching of the said boat; that the

photographs so taken <sup>for</sup> your orator shows the said Yacht in the act of being launched, and also shows the President of the United States and the said Prince Henry and the daughter of the President of the United States upon the said platform; that the said boat was christened by the daughter of the President of the United States by breaking upon its side a bottle containing some liquid, and that the said photograph shows the said daughter of the President of the United States in the act of christening the said boat by breaking the said bottle, and that the said positive films printed from the said negative, when thrown upon a screen by means of appliances like a magic lantern as above described give to the observer a truthful picture of the christening of the said boat and of the launching thereof, and shows the said President of the United States, the said Prince Henry and the said daughter of the President of the United States as aforesaid.

11. That by reason of the said boat being built for the said Emperor of Germany and by reason of the presence at the said launching of the persons above set forth, the said photograph is well known to the public and is much valued by them and the reproduction of it upon a screen as above set forth is much sought after by the public and many persons derive a large source of income by exhibiting the said photograph as aforesaid at theatres and other public places, so that your orator has sold large numbers of said films which are called in the trade "Positive films", and has derived and still is deriving large profits therefrom, and expects hereafter to continue to derive large profits as aforesaid.

12. That ~~excepting~~ as hereinafter set forth

your orator has been in the exclusive quiet use, enjoyment and profit of the said photograph, and his rights thereto have been universally acquiesced in by the public.

13. That notwithstanding the quiet use, enjoyment and profits of your orator in said photograph, and of the copyright protecting and reserving the same and all rights thereunder to your orator, the defendant Sigmund Lubin well knowing the premises, and of your orator's copyright, and wilfully disregarding your orator's rights and thereafter and in the months of April and May, in the year nineteen hundred and two wrongfully and fraudulently prepared, published and offered for sale, and did sell at the City of Philadelphia aforesaid and elsewhere in various Cities of the United States a copy of the said photograph copyrighted as aforesaid by your orator in nineteen hundred and two, under the titles "Launch of the Meteor", and "Launch" and threatens to continue such sales, all of which was, and still is, being done with intent to deceive and defraud the public and the buyers and users thereof; and the said defendant has published and sold, and is publishing and selling said photograph called "Launch of Meteor" and "Launch", which is a substantial copy and identical with your orator's aforesaid copyrighted photograph and threatens and intends to continue such publishing and sales.

14. That the said defendant surreptitiously and fraudulently purchased from your orator or from some person to whom your orator had sold the same after its copyright as aforesaid, one of said copyrighted photographs, with the intention of copying the same and selling the said copies in derogation of your orator's said right, and after so

purchasing the said photographs the said defendant did by photographic means make copies of the said photographs, and sold them to the public under the said title as aforesaid and threatens and intends to continue to make and sell the same as aforesaid, although well knowing that the said photograph had been copyrighted by your orator, and that such manufacture and sale of the same was a wrongful invasion of your orator's said rights.

15. That such imitation of the said photograph of your orator and such sale of the same is calculated to deceive the public, and actually has and still does mislead many of them to buy said photograph so wrongfully sold by the said defendant under the names "Launch of the Meteor" and "Launch", because they have and contain the same views as the said photograph copyrighted by your orator and sold by your orator, greatly to the diminution of your orator's said business and profits.

16. That by reason of the premises and the wrongful acts of the defendant as aforesaid, your orator has been injured to the amount of Five Thousand Dollars, and is still being injured by the continued sale and publication by the defendant of the said photograph, published and sold as aforesaid by him under the titles "Launch" and "Launch of the Meteor", although the defendant was duly notified by your orator a long time prior to the commencement of this action that your orator's said photograph had been copyrighted by your orator; and the defendant to the injury of your orator has thereby unjustly and unlawfully made and still makes great gains and profit which belong by right, and according to

law to your orator, to your orator's great damage and injury.

And your orator presents to this Court as exhibits in connection with this bill one of the photographs copyrighted by your orator and sold by him as aforesaid, marked at the end "Exhibit 1" and "J.B. Smith" and contained in a box upon which is the label "Christening and Launching of the Kaiser's Yacht Meteor", and also two of the copies of the same made and sold as aforesaid by defendant, one of which copies is marked "J.H.N." and "J.B. Smith" and contained in a box labelled with the title "Launch of the Meteor" with the initials "J.H.N." marked on said label, and the other marked "J.H.N." 3, contained in a box labelled with the title "Launch" and marked with the initials "J.H.N." on said label, the said two last named copies being each a copy of a portion of your orator's said copyrighted photograph.

All of which actings and doings are contrary to equity and good conscience and are done to the manifest injury of your orator in the premises.

17. Your orator therefore prays as follows:

(1) That the said defendant Sigmond Lubin may be required by decree of this Honorable Court to account for and pay over to your orator such gains and profits as have accrued or arisen or been ~~made~~ or received by the said defendant by reason of said unlawful doings and all such gains and profits as would have accrued to your orator, but for the unlawful doings of said defendant, and all damages your orator has sustained thereby.

(2) That the defendant be compelled by an order of this Court to deliver up to your orator all the copies of your orator's said copyrighted photo

topographs in the possession of the defendant and all negative films thereof;

(3) That the defendant and his associates, attorneys, servants, clerks, agents and workmen may be perpetually enjoined and restrained by writ of injunction issuing out of and under the seal of this Honorable Court from directly or indirectly using or causing to be used, selling or causing to be sold any copies of your orator's said copyrighted photograph not purchased from your orator.

(4) That your Honors, will grant unto your orator a preliminary injunction issuing out of and under the seal of this Honorable Court enjoining and restraining the said defendant and his associates, attorneys, servants, clerks, and workmen to the same purpose, tenor and effect as hereinabove prayed for with regard to the said perpetual injunction.

(5) That the said defendant may be decreed to pay the costs of this suit.

(6) That your orator may have such other and further relief as the equity of the case may require.

To the end therefore, that the said defendant may, if he can, show why your orator should not have the relief hereby prayed for, and may full true and direct answer make, but not under oath, answer under oath being expressly waived, according to the best and utmost of his knowledge, remembrance and belief to the several matters hereinabove ~~inserted~~ and set forth, as fully and particularly as if the same were repeated paragraph by paragraph and the said defendant thereto specifically interrogated.

May it please your Honors to grant unto your orator a writ of subpoena ad respondendum issuing out

of and under the seal of this Honorable Court directed to  
the said defendant Sigmond Tabin, commanding him to  
appear and make answer to this bill of complaint and to  
perform and abide by such orders and decrees herein as to  
this Court may seem just.

And your orator will ever pray etc.

*Edward W. Hughes*

Solicitor and of Counsel for  
Complainant.



1 orig  
3 carbon  
compare  
carefully  
Hunt & W  
H. H. H.

UNITED STATES CIRCUIT COURT,  
EASTERN DISTRICT OF PENNSYLVANIA.

THOMAS A. EDISON,  
Complainant.

VS.

I N E Q U I T Y.

SIGMUND LUBIN,  
Defendant.

BRIEF FOR COMPLAINANT.

This case comes on for final hearing on an agreed state of facts. That statement is so concise that it is needless to repeat it. The important facts are as follows: The complainant owns a negative of a photograph, taken by a machine of his own invention, of the launching of a yacht. This negative consists of about forty five hundred photographic views taken in rapid succession and so made that a positive <sup>exposed</sup> taken from it ~~can~~ <sup>may</sup> be thrown upon a screen by means of a machine similar to a magic lantern, and give the appearance of the actual motion of the launching of the yacht. Photographs were printed from this negative film and were duly copyrighted. Only one copyright was taken on each photograph, and the notice of copyright on those sold was put on the end of the film and not on each picture. The defendant purchased one of these positive films in the open market, from which the copyright mark had been removed. He then printed from it mechanically a negative film, and from that negative film printed positive films and sold them. These positive films sold by the defendant are identical with the one copyrighted by the complainant, except that on account of the successive printings they lack detail and have other defects. The following questions arise:

2.

I.

Does the removal of the notice of copyright by some third party before the purchase by the defendant, permit the defendant to make and sell copies of the copyrighted photograph ? This is answered in the negative, in the case of Faulk v. Gast, 54 Fed. Rep, 890, <sup>(C.C.A.)</sup> and I can add nothing to the reasoning of that case.

II.

Does the photograph in question show such artistic skill as to make it the subject of copyright ?

The subject photographed is the launching of a yacht. The photograph shows that a platform was placed along <sup>the</sup> side of the yacht, above which, hung against the side of the yacht, was a bottle containing some liquid to be used for the christening. Upon this platform a number of persons, including President Roosevelt, Prince Henry, Miss Roosevelt and others, appear and walk and move around and converse. The bottle is then broken by Miss Roosevelt and the yacht glides down the ways into the water. In order to take a good photograph of this scene it was necessary to use great artistic skill in placing the camera, having due regard to the time of day, the amount of light, and the lights and <sup>shadows</sup> shadows of the yacht and figures, and also as to the time of exposures. Consideration also had to be given to the fact that as the yacht was launched it moved away from the camera. It is evident that this required great artistic skill on the part of the photographer.

Of late years great advance has been made in the art of photographing inanimate objects. Many beautiful photographs of landscapes are continually taken. Photographers art clubs have been formed in many of the principal cities of the United States and annual exhibi-

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It was ~~also~~ held that a photograph of a yacht under sail shows artistic skill, and is a proper subject for copyright.

Should section 4592 of the act be liberally construed so as to hold that these series of photographic views constitutes "a photograph" within the meaning of the act?

This art of reproducing actual motion is the product of the genius of Thomas A. Edison. It is true that, before his time, some experimenters, notably ~~Mr.~~ *Muybridge* had taken instantaneous photographs of objects in motion, some of them successive; but no effort was made to prolong the operation so as to take a scene lasting

sometime, or to reproduce them. The persistence of the visual impression was well known, and scientific toys like the zoetrope were based on that knowledge; but Mr. Edison was the first one to grasp the possibilities of the art and to devise the mechanism by which photographs such as these could be taken and reproduced at will. It is true that on account of these early experiments a patent of his was declared invalid because the claims were too broad; but that patent has been surrendered and reissued, and the claims confined to the special mechanism invented by Mr. Edison, and no doubt will now be sustained.

The invention is a very meritorious one. By means of it great amusement and valuable instruction are given to the public. The photographs are sold throughout the country to various exhibitors, and are shown to audiences. The subjects embrace almost everything of interest throughout the world; a moving train, the ocean surf breaking on the sandy beach, the inauguration of President McKinley, the Coronation procession of Edward VII, the yacht race for the America cup, and are some of the subjects which are daily shown to interested and instructed audiences.

Taking the original negatives is very expensive, as will be readily seen. A photographer of great artistic skill ~~is~~ has to be employed and the most expensive cameras used. These photographers are sent all over the world to take interesting and instructive scenes. A special man was sent to take the Coronation procession of Edward VII. Z On the other hand the infringer of the copyright <sup>can</sup> do so at almost no expense. All an infringer has to do is to purchase one of the positive films, print from it a negative, and from that negative a positive, and

<sup>these positive</sup>  
then put ~~them~~<sup>^</sup> on the market. The expense is a little more than the cost of the sensitized films. This is the course pursued by the defendant.

All of these considerations must strongly appeal to the court and make it feel that it ~~must~~ should go as far as possible in trying to construe the act so as to protect these products of so valuable an art.

Each photographic view by itself is worthless. On account of the peculiar necessities of the art, the views have to be taken of such a character that each one hardly shows what the subject is, and would be worthless ~~if used~~<sup>if used</sup> ~~alone~~<sup>alone</sup> by itself. It is only when the photograph is used in connection with an apparatus like the magic lantern that it is useful, and then the actual scenes that were photographed appear on the screen. The character of these successive views can be easily seen by examining the positive films which <sup>are presented as</sup> ~~are~~ <sup>^</sup> ~~one of the~~ exhibits.

It is urged, however, that as another section of this act is penal, the entire act must be construed strictly.

It seems to me that this argument is fallacious. The act has two elements. The sections which are remedial and the section which imposed <sup>^</sup> the penalty. There is no reason why the remedial ~~act~~<sup>section</sup> should not be construed liberally and the penal section construed strictly. The effect of that would be to ~~acknowledge~~<sup>extend</sup> as far as possible the protection of the act and to construe broadly the description of ~~the~~ the article that could be copyrighted; while at the same time the owner of the copyright should be held strictly to all the formalities necessary to be gone through in order to obtain the photograph, and ~~that~~ in any penal action the provisions of the penal section

<sup>be</sup>  
~~be~~ construed strictly. This course seems to have been  
<sup>followed</sup>  
~~construed~~ by the courts of the United States from the  
~~earliest~~ <sup>earliest</sup> times, and ~~seems~~ <sup>seems</sup> will be found ~~well~~ <sup>contem-</sup>  
poraneously in which the remedial portion of the act is  
construed liberally; while, on the other hand, the penal  
section is construed strictly and the owner of the copy-  
right held to the strictest observance of the formalities  
necessary to obtain a valid copyright.

#### STATUTES.

The copyright statutes are briefly as follows:  
The Federal Constitution of 1787 gives Congress power to  
legislate for the protection of "authors and inventors."

The act of 1790 (1 Stat.at Large, p.124) covers  
"Map, chart, book or books". There is a penalty imposed  
of forfeiture and a fine of fifty cents for each sheet  
"found".

The act of 1802 (2 Stat.at Large p.171) added  
designs, engravings and etchings.

The act of 1831 (4 Stat at Large, p.436)  
added musical compositions.

The act of 1856 (11 Stat at Large, p.138) pre-  
vents the unauthorized performance of a dramatic composi-  
tion which has been copyrighted.

The act of 1865 (13 Stat at Large, p.540) adds  
photographs and negatives.

The act of 1870 (16 Stat at Large, section 86)  
added paintings, drawings, cromos, statues, statuary and  
models or designs intended to be perfected as works of ~~the~~  
fine arts, and permitted the "author, inventor, designer  
or proprietor" to take out the copyright. The penalty

is increased to one dollar for every sheet "found". This statute repeals the others and is practically identical with the statute now in existence. It was re-enacted in the revised statutes as sections 4948-4971.

The amendatory act of 1891 makes no change that needs be noted here, and the same may be said of the amendment of 1895. They affect only the penal section 4965.

#### DECISIONS.

The decisions that I can find bearing on the case are as follows, and they seem to unite in construing the remedial part of the act liberally and the penal part strictly.

#### DECISIONS ON REMEDIAL SECTIONS OF THE STATUTE.

DRURY v. EWING, 1 Bond.540.

25 MYERS, Fed.Rep.Dec.p.976.

A dress pattern sheet on a single sheet of paper is a "book" within the meaning of the copyright statute of 1831.

YUNGLING V.SCHILF, 12 Fed Rep.,97.

A cromo is a "print" under the act of 1831.

ROSSITER V.HALL, 5 Blatch.362.

25 MYERS, Fed.Dec.p.1028.

Notice of copyright may be printed on the margin of the print.

DALY V.PALMER, 6 Blatch.256.

25 MYERS, Fed.Dec.p.1092-1095.

A "dramatic" composition, design, or suited for public representation" is included in "book or books, map, chart, musical composition, print, cut or engraving."

U.S.  
LITHOGRAPH CO. VS. SARONEY, 111, <sup>A</sup> 53.

The initial of the given name or even the surname alone is enough in the notice of copyright. Photographs may be copyrighted "so far as they are representatives of original intellectual conception of the author."

CALLAGHAN VS. MYERS, 128 U.S. 617.

A copyright is taken in the name of W.B. Myers and Chandler. W.B. Myers' name was placed on the notice of copyright. Held an immaterial variation. The book was copyrighted in 1867. 1886 was used in the notice of copyright. Held immaterial variation. Reports of decisions may be lawfully copyrighted.

BRADY V. DALY, 111 U.S. 148, <sup>§</sup> Sec. 4966 of the Revised Statutes is not a penal statute.

A statute may be penal as to one person and remedial as to another.

Cases cited in Huntington vs. Attrill, 146 U.S. 657; approved in Brady v. Daly, 111 U.S. 148.

Myers vs. Callaghan, 5 Fed. Rep. 726, 732.

"It seems to me \*\*\* that these various provisions of law in relation to copyright should have a liberal construction, in order to give effect to what may be construed the inherent right of an author to his own work."

A list of horses with their speed records etc. may be copyrighted. Naston v. Gocher, 70 F.R. 237.

ROBERT V. GREENBERG, 100 Fed. Rep. 447.

DECISIONS ON THE PENAL SECTIONS OF THE STATUTE.

<sup>3</sup>  
JOHNSON V. DONALDSON, <sup>A</sup> Fed. Rep. 22.

In an action for penalties the defendant cannot be compelled to produce his books.



BACKUS V. GOULD, 7 HOWARD, 798.

The penalty of fifty cents under the act of 1831 "is limited to the sheets in the possession of the defendant \*\*\* as this is a penal section it must be construed strictly."

THORNTON V. SCHRINKER, 124 U.S. 612.

Photographs in the actual custody of an employee are not in his "possession", but in the "possession" of the employer, under R.S. ~~Section~~ 4965; the penal section.

BOWLES V. OUTING, 175 U.S. 262.

The penalty of \$1.00 of R.S. ~~Section~~ 4965 extends only to sheets "found" in defendant's possession by some legal process like replevin. This section is spoken of as a penal statute to be construed strictly. ^

BRADY V. DAILY, and ~~BACKUS V. GOULD~~, approved.  
Backus v.

SARONEY V. MERRICH, 28 F.R. 79.

"The section in question (R.S. 4965) must be ~~seen~~ strictly construed."

HENDON V. CARR, 96 Fed. Rep. 213 (C.C.A.) ~~2nd Circuit~~

In an action for a penalty under R.S. 4965, compliance with the provisions of section ~~4956~~ 4956 "which should be strictly construed because it contains the condition precedent to the recovery of severer penalties" is necessary; and both the <sup>C</sup>description and the <sup>A</sup>photograph of a copyrighted painting must be deposited with the Librarian of Congress.

FAIK V. CURTIS, 102 Fed. Rep. 967.

Action to recover penalty under R.S. 4965. The suit was begun before seizure. Held premature. "As the plaintiff is seeking to enforce a highly penal statute, he is rightly held to a strict compliance with the forms

10.

of legal procedure."

Affirm<sup>d</sup> in Falk vs. Curtis, 107 Fed. Rep. 126 (C.C.A)  
Sixth Circuit Court).

In this case the complainant does not seek to enforce a penalty. His rights are given to him by R.S. 4952, which is purely remedial and contains no penal features; and a means of protecting those rights is given by section 4970, under which this bill is filed.

It is respectfully submitted that a decree should be granted in favor of the complainant.

*Howard H. Hayes*

Of counsel with complainant.

THOMAS A. EDISON, PRES.

W. E. GILMORE, VICE PRES.

J. P. RANDOLPH, Secy & Treas.

CABLE "KURILIAN" NEW YORK.

SALES ROOMS:  
35-37th AVENUE, ROOMS 203-205  
NEW YORK.  
83 CHAMBERS STREET.



Orange, N. J., July 29, 1902.

William Pelzer, Esq.,

c/o Howard W. Hayes,

Newark, N. J.

Dear Mr. Pelzer:

I have your favor of the 24th, advising me re: the Edison-Lubin case. I presume that under the circumstances there is no further redress for us, but at the same time I want you to make a memo. and put it on Mr. Hayes' desk so that when he returns I can take it up and discuss it with him. I do not want to give up the fight if there is a possible way of getting around it, as this man Lubin is continuing to duplicate films that cost us a great many hundreds of dollars to obtain and one particular film that we have just gotten out has cost us pretty near a thousand dollars to get the negative, and he simply goes ahead and copies same, making a negative and issuing positives from same indiscriminately, so you can see that he is doing our business a great deal of harm and we, apparently, have no redress.

Yours very truly,

*W. E. Gilmore*  
Vice-Pres. & Gen. Mgr.

WEG/TWW

Newark, N.J.: Apr. 21-1903.

Thomas A. Edison, Esq.,  
Stewartsville,  
Warren Co., N. J.

Dear Mr. Edison:- *Lubin case*  
I have just received from the Clerk of the U. S.  
Circuit Court of Appeals at Philadelphia a letter as follows:

"Howard W. Hayes, Esq.,

Dear Sir:-

The court to-day handed down an opinion in  
the case of Thomas A. Edison, Appellant, vs. Sigmund Lubin,  
Appellee, No. 23 March Term 1903 by Buffington, District Judge,  
in which the decree of the Circuit Court was reversed with directions  
to enter a decree in favor of the Complainant."

*W.H.H.* That seems to me that the present copyright law  
expands to moving pictures and that the method of copyrighting and  
affixing notices pursued heretofore by you is sufficient. I have  
sent for a copy of the opinion, which I will send to you at once.

Yours truly,

RWH/S.D.

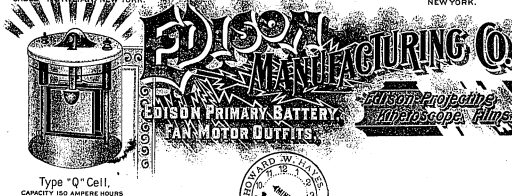
THOMAS A. EDISON, Pres.

W. E. GILMORE, Vice Pres.

J. F. RANDOLPH, Secy & Treas.

CABLE: AMERICAN NEW YORK

SALESROOMS,  
83 Chambers Street,  
NEW YORK.



Type "Q" Cell,  
CAPACITY 150 AMPERE HOURS



Orange, N. J., April 30, 1903.

Howard W. Hayes, Esq.,

Newark, N. J.

MAY 1 - 1903

NEW YORK, N. Y.,

MAY 4 - 1903

Dear Sir:

Referring to your letter of April 22nd, enclosing copy of the decision in the Lubin case, it is my desire that we spread this broadcast, so that other infringers will know that the decision is in our favor. Of course we have got to issue something to the trade generally, and I wish you would get up what you consider would be proper. You will remember that there was some arrangement with Mr. Butler, the attorney for Lubin, whereby we were not to advertise this. I presume it will not be possible for us to place any advertisement in the "Clipper". If we can do so, I would like you to arrange to give me what you would consider proper in the way of an advertisement.

Yours very truly,

W. E. Gilmore

Vice-Pres. & Gen. Mgr.

WEG/IWW

Mr. Gilmore was obliged to  
leave before signing the above  
letter dictated by him.

[ATTACHMENT]

IN THE UNITED STATES CIRCUIT COURT OF  
APPEALS  
for the Third Circuit.

Thomas A. Edison,  
Appellant,

v.

Sigmund Lubin,  
Appellee.

Appeal from the Circuit Court of the United States  
for the Eastern District of Pennsylvania.  
Before Acheson, Circuit, and Buffington and Kirkpatrick,  
District Judges.

Buffington, J.

In the court below Thomas A. Edison, appellant, filed a bill in equity against Sigmund Lubin, appellee, praying an injunction for alleged infringement of a copyright. That court being of opinion, see 119 Fed. Rep., 993, such copyright had no statutory warrant entered a decree dismissing the bill, whereupon complainant took this appeal. The question involved is novel, interesting and within its sphere, important. The complainant's operator, by means of a pivoted camera of special construction designed and owned by complainant, took in rapid succession, on a single highly sensitized celluloid film three hundred feet long, forty-five hundred pictures, each of which was a shade different from its predecessor and successor, and all of which collectively represented at different points Kaiser Wilhelm's Yacht Meteor while being christened and launched. From this film or negative a positive reproduction was made on a celluloid sheet by

[ATTACHMENT]

light exposure. The value of such celluloid reproduction is that by means of an appliance similar to a magic lantern, these views may be thrown on a screen in rapid succession so as to give the effect of actual motion and pictorially reproduce the launching precisely as it took place. This positive celluloid sheet was sent by the complainant to the Department of the Interior and by it copyrighted to him as proprietor under "the title of a photograph, the title to which is in the following words, to wit, "Christening and Launching Kaiser Wilhelm's Yacht Meteor". The complainant hereafter places on the copies thereof issued by him a notice of copyright inscribed on a celluloid plate fastened on the front and at the end, of the sheet. From the other end of one of such marked articles about one-third thereof was detached by some unknown person and came into the hands of respondent without knowledge on his part of its having been copyrighted. The fifteen hundred pictures on this part, which represented a part of the launch, Lubin photographed on a sensitized celluloid film. From this negative he reproduced a positive on a celluloid sheet which was of course an exact reproduction of the copyrighted one of the complainant. These were sold to exhibitors and enabled them to reproduce the part of the launch therein represented. The Act of Congress, R.S. Sec. 4952, under which the Department of the Interior issued this copyright provides: "Any citizen of the United States"\*\*\*who shall

[ATTACHMENT]

be\*\*\* the author or proprietor of any\*\*\*photograph or negative thereof\*\*\*shall upon complying with the provisions of this chapter have the sole liberty of printing, reprinting, publishing, completing, copying, executing, finishing and vending the same." Does such Act warrant the granting of this copyright? On that question the court below said: "That section extended the copyrighting system to "any\*\*\*photograph", but not to any aggregation of photographs, and I think that, to acquire the monopoly it confers, it is requisite that every photograph, no matter how or for what purpose it may be conjoined with others, shall be separately registered, and that the prescribed notice of copyright shall be inserted upon each of them."The court also held that as the violation of a copyrighted photograph was a subject of penalty under a subsequent section, the section authorizing the copyright must be strictly construed. An examination shows that the negative and its positive reproduction represent one act or event; to wit, the launch of the yacht. This launch was portrayed on a single negative film, by one operator and a camera, operated from a single point and such negative simply photographically reproduces in continuous form the view of the launch presented to the eye of an onlooker at the spot occupied by the camera. The instantaneous and continuous operation of the camera is such that the difference between successive pictures is not distinguishable by the eye and is so slight that the



[ATTACHMENT]

casual observer will take a very considerable number of successive pictures of the series and say they are identical. It is only when pictures far removed from each other in the series are compared that differences are seen, but in every one the platform from which the christening took place, and on which prominent persons attending the launch stood, is depicted. To require each of numerous undistinguishable pictures to be individually copyrighted, as suggested by the court, would in effect be to require copyright of many pictures to protect a single one. So much for the negative.

When we consider the positive sheet which was copyrighted, we have a stronger case? What was thus copyrighted was a single celluloid sheet on which a number of objects had been photographically printed or reproduced. That these objects were there portrayed by light action or photography is unquestioned. No matter how the negative was obtained, whether by numerous and successive exposures, is not here material. The statute provides for copyrighting negatives, but the present issue is not whether the negative in question was one covered by the statute, but whether when the negative as a whole was photographically reproduced, the reproduction was a photograph. On that point we feel assured. When the reproduction was made, complainant's celluloid negative simply possessed the reproductive capacity by light action incident to the photographic art. The image which had been thrown by light reflected from the originals and passed

[ATTACHMENT]

through a camera to produce the negative, in the reproductive process produced the positive by light action passed through such transparent negative. The mere circumstance that such positive is pictured on a strip of celluloid and not on a strip of paper is immaterial. In either event, the reproduction is a light-written and therefore a photographic picture or photograph. To say that the continuous method by which this negative was secured was unknown when the Act was passed and therefore a photograph of it was not covered by the Act, is to beg the question. Such construction is at variance with the object of the Act which was passed to further the constitutional grant of power "to promote the progress of science and useful arts". When Congress in recognition of the photographic art saw fit in 1865 to amend the Act of 1831, and extend copyright protection to a photograph or negative, it is not to be presumed it thought such art could not progress and that no protection was to be afforded such progress. It must have recognized there would be change and advance in making photographs just as there has been in making books, printing chromos and other subjects of copyright protection. While such advance has resulted in a different type of photography, yet it is none the less a photograph—a picture produced by photographic process. From the standpoint of preparatory work in securing the negative the latter consists of a number of different views, but when the negative

[ATTACHMENT]

was secured the article reproduced therefrom was a single photograph of the whole. And that it is in substance a single photograph is shown by the fact that its value consists in its protection as a whole or unit and the injury to copyright protection consists not in pirating one picture but in appropriating it in its entirety.

We are further of opinion the photograph in question met the statutory requirement of being intended to be perfected and completed as a work of the fine art. It embodies artistic conception and expression. To obtain it requires a study of lights, shadows, general surroundings and a vantage point adapted to securing the entire effect. In *Bolles vs. The Outing Company*, 77 Fed. Rep., 966, depicting a yacht under full sail was held to constitute an original work of art, and in view of the recent decision of the Supreme Court, *Bleistein vs. Donaldson Company*, 108 O.G., p. 1853 in reference to the character in that regard of a circus poster, we have no question that the present photograph sufficiently fulfills the character of a work of the fine arts. We are also of opinion the sheet was only marked for it was such as "to give notice of the copyright to the public by placing upon each copy in some visible shape the name of the author, the existence of the claim to exclusive right and the date at which this right was obtained", which in *Burrow-Giles Co. vs. Sarony*, 111 U.S., 755 was said to be

[ATTACHMENT]

the object of the statute.

The decree of the court below is therefore reversed  
with directions to enter a decree for the complainant.

MELVILLE CHURCH,  
J. B. CHURCH,  
—  
A. S. STEUART.

PATENT CAUSES.

LAW OFFICES OF  
CHURCH & CHURCH,

McGILL BUILDING,  
908 G STREET N.W.

LONG DISTANCE TELEPHONE  
HAY 3165.

CABLE ADDRESS "CHURCH"  
A. S. C. 0818 1940.

WASHINGTON, D. C.

Nov. 9, 1904.

Mr. Frank L. Dyer,  
Edison Laboratory,  
Orange, N. J.

My dear Mr. Dyer:-

I take pleasure in informing you that day before yesterday the Supreme Court of the United States granted my motion to dismiss the appeal taken by Rubin in the case of Rubin vs. Edison. It will be some little time before the mandate is sent down. When it is, I think I had better attend to the entry of the decree in the court below. I think I can so phrase it as to prevent, by any possibility, the case getting back into the Supreme Court.

Congratulating you and Mr. Edison upon the result, I remain,

Yours truly,

CA

*Melville Church*



Lubin vs Edison.

Dec. 27, 1904.

Melville Church, Esq.,

908 - G Street,

Washington, D.C.

My dear Mr. Church:-

Your favor of the 9th ult. was duly received, and I am glad to hear that the Supreme Court granted your motion to dismiss Lubin's appeal and congratulate you on the result.

When the mandate is sent down, kindly attend to the entry of the decree in the Court below, as you suggest.

Yours very truly,

FLD/ARK.

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**END**

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# Thomas A Edison Papers

*A SELECTIVE MICROFILM EDITION*

*PART IV*  
*(1899-1910)*

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